

LIEN FILING RECORD
CHEM-FAB SUPERFUND SITE
DOYLESTOWN, BUCKS COUNTY, PENNSYLVANIA

INDEX OF DOCUMENTS

Property Documents

1. Deed in Lieu of Execution” between 300 N. Broad Street, Ltd., Grantor, and Turog Properties Limited, Grantee, dated October 21, 2005 and recorded in the Bucks County Recorder of Deeds Book 4827, Page 268.
2. Printout from Bucks County, Pennsylvania Board of Assessment Website (May 22, 2019).

Response Documentation

3. Request for Approval of Funds for a Removal Action at Chem-Fab Corporation Drum Site (approved March 24, 1995) (drums and chemicals).
4. Federal On Scene Coordinator’s After Action Report (undated).
5. Special Bulletin A (November 8, 2012) (installation of air purifiers).
6. Request for Additional Funds for a Removal Action, Approval for a \$2 Million Exemption Request and Scope Change at the Chem-Fab Site (approved September 19, 2013) (excavation and disposal of contaminated soil outside Building A footprint).
7. Request for a Scope Change for the Removal Action at the Chem-Fab Site (approved May 28, 2014) (bottled water to impacted residents).
8. Request for a Scope Change to Continue the Removal Action at the Chem-Fab Site (approved January 20, 2015) (water connection).
9. Request for a Scope Change to Continue the Removal Action at the Chem-Fab Site (approved September 30, 2015) (permanent depressurization system in Building A).

10. Request for a Scope Change to the Removal Action at the Chem-Fab Site (approved July 10, 2018) (surface water issue and fan replacement).
11. Federal On Scene Coordinator's After Action Report (November 2012-September 2016).
12. Administrative Order No. CERC-03-2017-014-DC (May 31, 2017) (O&M).
13. Administrative Order No. CERC-03-2017-014-DC Amendment No. 1 (July 19, 2017).
14. Administrative Order No. CERC-03-2017-014-DC Amendment No. 2 (November 15, 2017).
15. Record of Decision for Early Interim Remedial Action (July 17, 2017) (interim groundwater pump and treat).

Cost Documentation

16. Report of Response Costs From July 11, 1993 Through June 4, 2019 (June 6, 2019) (reconciliation pending).

Notice of Potential Liability

17. Letter from Karen Melvin to Turog Properties Ltd (December 6, 2007).
18. PS Form 3811 Domestic Return Receipt for Article Number 7000 1670 0013 0588 5308 signed by "M Foster" (December 11, 2007).

Liability-Related Documents

19. Administrative Order No. CERC-03-2011-0209-DC (July 14, 2011) (access).
20. Letter from Eduardo Rovira to Turog Properties Limited, re: "Administrative Order No. CERC-03-2017-0140-DC: Compliance Issues" (October 16, 2018).

21. Email from Eduardo Rovira to Andrew Goldman, re: "Chem-Fab Deadlines" (December 7, 2018).
22. Letter from Joanne Marinelli to Heywood Becker, Esq. and Turog Properties Ltd., re: "Required Submission of Information" (April 25, 2018).
23. Email from Heywood Becker to Andrew Goldman and Joan Martin-Banks, re: "Turog Documents in Support" (May 21, 2018).
24. Email from Andrew Goldman to Heywood Becker and Joan Martin-Banks, re: "Turog Documents in Support" (June 6, 2018).
25. Email from Andrew Goldman to Heywood Becker re: "May 15, 2018 Letter" (June 18, 2018).
26. Email from Heywood Becker to Andrew Goldman re: "May 15, 2018 Letter" (June 18, 2018).
27. Email from Andrew Goldman to Heywood Becker (re: "May 15, 2018 Letter") (July 13, 2018).
28. Email from Heywood Becker to Andrew Goldman re: "May 15, 2018 Letter" (July 14, 2018).
29. Email from Andrew Goldman to Heywood Becker re: "May 15, 2018 Letter" (August 7, 2018).
30. Letter from Andrew Goldman to Heywood Becker re: "Overdue Response to April 25, 2018 Information Request" (September 4, 2018).
31. Letter from Andrew Goldman to Heywood Becker re: "Overdue Response to April 25, 2018 Information Request" (October 25, 2018).

BUCKS COUNTY RECORDER OF DEEDS
55 East Court Street
Doylestown, Pennsylvania 18901
(215) 348-6209

Instrument Number - 2006016843

Recorded On 2/2/2006 At 2:10:47 PM

* Total Pages - 4

* Instrument Type - DEED

Invoice Number - 115864

User - KLJ

* Grantor - THREE (300) N BROAD STR L T D

* Grantee - TUROG PROP

* Customer - K BECKER

*** FEES**

RECORDING FEES \$46.50

TOTAL \$46.50

This is a certification page
DO NOT DETACH
This page is now part
of this legal document.

RETURN DOCUMENT TO:
K BECKER

I hereby CERTIFY that this document is recorded in the Recorder of Deeds Office of Bucks County, Pennsylvania.



Edward R. Gudknecht
Edward R. Gudknecht
Recorder of Deeds

* - Information denoted by an asterisk may change during the verification process and may not be reflected on this page.

Book: 4827 Page: 268



Prepared By: Michael Foster
Return To: Turog Properties c/o Michael Foster
PO Box 78
Quakertown, PA 18951
CPN# 8-5-1-1

DEED IN LIEU OF EXECUTION

KNOW ALL MEN BY THIS DEED IN LIEU OF EXECUTION dated October 21, 2005, given by the Grantor to the Grantee, as follows:

300 N. Broad Street, Ltd.,
the Grantor, Owner and Mortgagor, to

Turog Properties Limited,
the Grantee, and Assignee of the subject Mortgage In Default,

and their successors and assigns for \$1.00 and other good and valuable consideration whereby the said Grantor hereby conveys, grants, and sells the following described real property to the Grantee in lieu of execution of the subject mortgage in default, the said mortgage in default being dated January 5, 2005, and recorded on September 2, 2005, in Book 4609, page 1401 in the Office of the Recorder of Deeds for Bucks County, and assigned to the Grantee by Assignment of Mortgage dated October 4, 2005, and recorded on February 1, 2006, in Book 4825, page 2101 in the Office of the Recorder of Deeds for Bucks County, and the real property made subject to the mortgage in default is described as:

ALL THAT CERTAIN lot or piece of ground situate in Doylestown Borough, Ss N. Broad Street, 673' W. of Doyle street, having a lot size of 222 x 214, more particularly described in Deed to Chem Fab Corp., P.O. Box 123, Revere, PA 18953, dated 10/18/67 and recorded in the Office of the Recorder of Deeds in and for Bucks County, in Deed Book 1879, page 190;



REALTY TRANSFER TAX STATEMENT OF VALUE

See Reverse for Instructions

RECORDER'S USE ONLY	
Main Tax Field	8
Book Number	
Page Number	
Date Recorded	

Complete each section and file in duplicate with Recorder of Deeds when (1) the full value/consideration is not set forth in the deed, (2) when the deed is without consideration, or by gift, or (3) a tax exemption is claimed. A Statement of Value is not required if the transfer is wholly exempt from tax based on: (1) family relationship or (2) public utility easement. If more space is needed, attach additional sheet(s).

A CORRESPONDENT - All inquiries may be directed to the following person:

Name	Howard Becker			Telephone Number:	
Street Address	P.O. Box 180	City	Canonsville, PA	Area Code	717, 297 5700
				State	19913
				Zip Code	19913

B TRANSFER DATA

Grantor(s)/Lessor(s)	300 N. Broad Street, Limited	Date of Acceptance of Document	October 21, 2005
Street Address	P.O. Box 180	Grantee(s)/Lessee(s)	Turog Properties Limited
City	Canonsville, PA	Street Address	P.O. Box 78
State	PA	City	Quakertown, PA
Zip Code	19913	State	PA
		Zip Code	19951

C PROPERTY LOCATION

Street Address	300-360 N. Broad Street		City, Township, Borough	Quakertown Borough	
County	Bucks	School District	Central Bucks	Tax Parcel Number	85-1-1

D VALUATION DATA

1. Actual Cash Consideration	2. Other Consideration	3. Total Consideration
ZERO	+	= ZERO
4. County Assessed Value	5. Common Level Ratio Factor	6. Fair Market Value
50920	x 9.97	= 496,792.40

E EXEMPTION DATA

1a. Amount of Exemption Claimed	1b. Percentage of Interest Conveyed
100%	100%

2. Check Appropriate Box Below for Exemption Claimed

- Will or Intestate succession _____ (Name of Decedent) _____ (Estate File Number)
- Transfer to Industrial Development Agency.
- Transfer to a trust. (Attach complete copy of trust agreement identifying all beneficiaries.)
- Transfer between principal and agent. (Attach complete copy of agency/straw party agreement.)
- Transfers to the Commonwealth, the United States and instrumentalities by gift, dedication, condemnation or in lieu of condemnation. (If condemnation or in lieu of condemnation, attach copy of resolution.)
- Transfer from mortgagor to a holder of a mortgage in default. Mortgage Book Number 4609, Page Number 1401
- Corrective or confirmatory deed. (Attach complete copy of the prior deed being corrected or confirmed.)
- Statutory corporate consolidation, merger or division. (Attach copy of articles.)
- Other (Please explain exemption claimed, if other than listed above.)

Mortgage assigned to Grantee on 2/1/06, Book 4925, pg. 401

Under penalties of law, I declare that I have examined this Statement, including accompanying information, and to the best of my knowledge and belief, it is true, correct and complete.

Signature of Grantee(s) or Responsible Party	Date
	2/2/06

FAILURE TO COMPLETE THIS FORM PROPERLY OR ATTACH APPLICABLE DOCUMENTATION MAY RESULT IN THE RECORDER'S REFUSAL TO RECORD THE DEED.

ALSO KNOWN AS Bucks County Uniform Parcel Identifier:

Tax Map Parcel 8-5-1-1;

BEING the same real property purchased by the Mortgagor, 300 N. Broad Street, Ltd. by deed dated May 27, 1999, and recorded in the Bucks County Recorder of Deeds Office at Book 1849, page 1123;

TO HAVE AND TO HOLD the said lot of land with the improvements thereon erected, and the appurtenances thereto, for the uses and purposes of the Grantee, their successors and assigns forever;

UNDER AND SUBJECT TO all mortgages and liens of record.

IN WITNESS WHEREOF, the Grantor, a Pennsylvania limited partnership, has caused this Deed In Lieu of Execution to be executed under seal by the trustee of their General Partner, a Pennsylvania trust as follows:

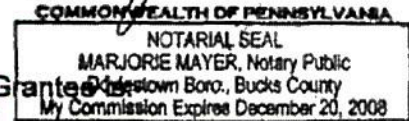
300 N. Broad Street, Ltd.

BY: Heywood Becker, Trustee

COMMONWEALTH OF PENNSYLVANIA, COUNTY OF BUCKS, SS:

On this, the 2nd day of February, 2006, before me appeared Heywood Becker, personally known to me or satisfactorily proven to be the person hereinabove named, who represented that he is the trustee of Broad Street Trust, the General Partner of 300 N. Broad Street, Ltd., a Pennsylvania limited partnership, and who represented that he has the power and authority to execute this deed on behalf of the Grantor, and who acknowledged that he voluntarily executed the foregoing instrument for the purposes herein contained.

Notary Public



I certify that the precise address of the within named Grantee is Post Office Box 78, Quakertown, PA 18951

Signed:

T.M.P. # 8-5-1-1 Page 1

Transferred 10-21-05 Date 2-2-06

Secretary

PARID: 08-005-001-001
TUROG PROP

MUN: 08 - DOYLESTOWN BORO
300 N BROAD ST

Parcel

Included Parcel No
 Included Parcel Parent
 Has Included Parcel
 Property Address 300 N BROAD ST
 Unit Desc -
 Unit #
 City
 State
 Zip
 File Code 1 - Taxable
 Class C - Commercial
 LUC 4000 - Varied Commercial
 Additional LUC -
 School District S05 - CENTRAL BUCKS SD
 Special Sch Dist -
 Topo -
 Utilities 1 - All Public
 Roads 1 - Paved
 Total Cards 3
 Living Units 0
 CAMA Acres 0

Parcel Mailing Details

In Care Of
 Mailing Address
 PO BOX 180
 CARVERSVILLE PA 18913

Current Owner Details

Name TUROG PROP
 In Care Of
 Mailing Address
 PO BOX 180
 CARVERSVILLE PA 18913
 Book 4827
 Page 0268

Owner History

Date	Owner Name 1	Owner Name 2	Address	Acquisition Dt	Sale Date	Book	Page
09-MAY-11	TUROG PROP			02-FEB-06	21-OCT-05	4827	268
09-MAY-11	TUROG PROP			02-FEB-06	21-OCT-05	4827	0268
16-JUL-99	THREE (300) N BROAD STREET LTD,			16-JUL-99	03-JUN-99	1849	1123
18-OCT-67	CHEM FAB CORP			18-OCT-67	18-OCT-67	1879	190

Commercial

Card	Program Number	Year Built	Floor	Standard Code	Grade	Number of Identified Units	Improvement Name	Total Units	Revised
1	001	1972		353 - 353	C - AVERAGE	1	IND BLD CONV TO 7 UNIT OFFICE	10896	
2	002	1800		353 - 353	C - AVERAGE	1	DWL CONV TO OFFICE W FIN ATTIC	3169	
3	003	1962		353 - 353	C - AVERAGE	1	1 & 2S OFFICE	2964	

Interior/Exterior Details

Card 2
 Line 1
 Sect 1
 From Level 1
 To Level 1
 Year Built 1800
 Area 1,585
 Perimeter 159
 Use Type 353
 Use Grp
 Wall Height 10
 Physical Dep.

Functional Dep.
Interior Finish % 100%

Summary of All Other Features

1 of 6

Card	1
Line	0
Int/Ext Line	1
Measurement 1	
Measurement 2	
Elevator Stops	
Ident Units	1
Sketch Area	

OBY

Card	Level	Code
1	3	FN1 - FENCE CHAIN
1	1	PA1 - PAVING ASPHALT PARKING

OBY Details

1 of 2

Card	1
Code	FN1 - FENCE CHAIN
Year Built	1967
Width	
Length	
Area	1,854
Units	1

Land

Line Number	1
Frontage	
Depth	214.0000
Units	
CAMA Square Feet	
CAMA Acres	

Legal Description

Municipality	08
School District	S05
Property Location	300 N BROAD ST
Description	-
Building/Unit #	-
Subdivision Parent Parcel	08005001-001
Legal 1	SS N BROAD ST 673' W OF
Legal 2	DOYLE ST
Legal 3	222X214
Deeded Acres	
Deeded Sq Ft	

Values

Exempt Land	0
Exempt Building	0
Total Exempt Value	0
Assessed Land	18,800
Assessed Building	86,950
Total Assessed Value	105,750
Estimated Market Value	1,016,820

Assessment History

Code	Reason/EN	Notice Type	Effective Date	Land Area	Blind Assnt	Total Area	214 Land	110 Area	214 Total	Exempted Area	Year
26-JAN-19	999 - Year End Certification			\$18,800	\$86,950	\$105,750	\$0	\$0	\$0		2019
02-JUL-18	390 - School			\$18,800	\$86,950	\$105,750	\$0	\$0	\$0		2018
25-JAN-18	999 - Year End Certification			\$18,800	\$86,950	\$105,750	\$0	\$0	\$0		2018
30-JUN-17	390 - School			\$18,800	\$86,950	\$105,750	\$0	\$0	\$0		2017
06-JUL-16	390 - School			\$18,800	\$86,950	\$105,750	\$0	\$0	\$0		2017
01-JUL-15	390 - School			\$18,800	\$86,950	\$105,750	\$0	\$0	\$0		2016
07-JUL-14	390 - School			\$18,800	\$86,950	\$105,750	\$0	\$0	\$0		2015
27-JUN-13	999 - Year End Certification			\$18,800	\$86,950	\$105,750	\$0	\$0	\$0		2014
28-APR-11	900 - Appeal Denied	02-JUL-09	01-APR-09	\$18,800	\$86,950	\$105,750	\$0	\$0	\$0		2013
							\$0	\$0	\$0		2011

28-APR-11	900 - Appeal Denied	02-JUL-09	01-APR-09	\$18,800	\$86,950	\$105,750	\$0	\$0	\$0	2010
28-APR-11	900 - Appeal Denied	02-JUL-09	01-APR-09	\$18,800	\$86,950	\$105,750	\$0	\$0	\$0	2009
28-APR-11	374 - Ratio Change 2005 Tax Year	05-JAN-05	01-JAN-05	\$18,800	\$32,120	\$50,920	\$0	\$0	\$0	2008
28-APR-11	374 - Ratio Change 2005 Tax Year	05-JAN-05	01-JAN-05	\$18,800	\$32,120	\$50,920	\$0	\$0	\$0	2007

ASSESSMENT HISTORY

Note: To find the current assessment for totally exempt parcels you MUST refer to the Values Tab. Parcels that are partially taxable and partially exempt will show the assessed taxable portion only in the Assessment History Tab.

Sales

Sale Date	Sale Price	New Owner	Old Owner
21-OCT-05	1	TUROG PROP	THREE (300) N BROAD STREET LTD,
21-OCT-05	1	TUROG PROP	TUROG PROP
03-JUN-99	30,109	THREE (300) N BROAD STREET LTD,	CHEM FAB CORP
18-OCT-67	0	CHEM FAB CORP	

Sale Details

1 of 4

Sale Date	21-OCT-05
Sales Price	1
New Owner	TUROG PROP
Previous Owner	THREE (300) N BROAD STREET LTD,
Transfer Tax	0.00
Recorded Date	02-FEB-06
Instrument Type	
Book	4827
Page	0268
Instrument No.	20060168430001

Estimated Tax Information

County	\$2,585.59
Municipal	\$1,604.76
School	
Total	\$4,190.35

PLEASE NOTE THAT THE MUNICIPAL RATES DO NOT INCLUDE SPECIAL TAXES, IE: TRASH; ELECTRIC; FIRE HYDRANTS, ETC. THAT INFORMATION MAY BE OBTAINED FROM YOUR LOCAL TAX COLLECTOR DIRECTLY.

Hearing Details

Type	C
File Date	11/Jan/2010
Attorney	
Other	
Case No.	0000007781
Hearing Status	A
Appeal Fee	
Check #	
Hearing Date	
Start Time	
Board Member	
Location	
Notice Date	
Effective Date	
Court Appeal File Date	
Reason Code 1	
Reason Code 2	
Reason Code 3	

Reason Code Definiton

1. Having reviewed all information relevant to your appeal hearing, the Board has concluded the current assessment to be fair and equitable.
2. Having made no personal appearance at the appeal hearing before the Board, or submitted any information to support your position, the appeal is considered abandoned.
3. Failure to submit relevant information to support your position or additional information as requested at your appeal hearing.
4. Failure to comply with the Rules and Regulations governing appeals before the Board.
5. Our appraiser has rechecked your property and confirms the information of record to be accurate.
6. The laws mandate Market Value as the basis for assessment. The inability to pay taxes or other unrelated concerns, unfortunately cannot be considered.
7. Protective Court Appeal.
8. Failure to meet the burden of proof.

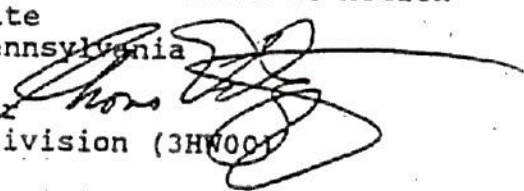


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

ORIGINAL
(Red)

MAR 23 1995

SUBJECT: Approval of a Request for Funds for a Removal Action
Chem Fab Corporation Drum Site
Doylestown, Bucks County, Pennsylvania

FROM: Thomas C. Voltaggio, Director 
Hazardous Waste Management Division (3HW001)

TO: Elliott P. Laws, Assistant Administrator
Office of Solid Waste and Emergency Response (5101)

THRU: Stephen Luftig, Acting Director
Office of Emergency and Remedial Response (5201)

ATTN: John Riley, Acting Director
Emergency Response Division (5202)

ISSUE

The attached CERCLA Request for Funds for a Removal Action pertains to the Chem Fab Corporation Drum Site, a defunct business located in a commercial area in Doylestown, Bucks County, Pennsylvania. A removal assessment was conducted on September 13, 1994. During investigation EPA Region III, National Enforcement Investigations Center (NEIC), and others found the presence of improperly and incompatibly stored drums of hazardous substances. These substances included but were not limited to flammable liquids such as methyl isobutyl ketone and acids, including hydrochloric acid. Some drums bore labels, indicating that they were waste acids dating back to the mid 1980's. Some drums were staged inside a building while others were outside and fully exposed to the elements. Additionally, a 50-foot underground storage tank of questionable integrity, was uncovered and found to contain an unknown substance that appeared to be leaking.

Because conditions at the Chem Fab Corporation Drum Site, meet removal criteria set forth in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR, Section 300.415, and pursuant to Delegation of Authority 14-1-A, the Hazardous Waste Management Division Director has authority to approve CERCLA Removal actions with a total cost of less than \$2 million and completion within 12 months. US EPA Region III has approved the release of \$607,120 of which approximately \$580,800 are Extramural costs, to mitigate the threat to public health, welfare, and the environment.

Attachment: Request for Funds



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

ORIGINAL
(Red)

MAR 28 1995

SUBJECT: Request for Funds for a Removal Action
Chem Fab Corporation Drum Site
Doylestown, Bucks County, Pennsylvania

FROM: George English, On-Scene Coordinator *George W. English*
Eastern Response Section (3HW31)

TO: Thomas C. Voltaggio, Director
Hazardous Waste Management Division (3HW00)

THRU: Abraham Ferdas, Associate Division Director for
Superfund Programs (3HW02) *Abraham Ferdas*

I. PURPOSE

A removal assessment was performed at the Chem Fab Corporation Drum Site (Site) in Doylestown, Bucks County, Pennsylvania, on 09/13/94 in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300, by the On-Scene Coordinator (OSC). The OSC has determined that the Site poses an imminent and substantial threat to public health, welfare, and the environment, due to the presence of uncontrolled hazardous substances in drums and containers. The OSC has determined that the Site meets the criteria for initiating a Removal Action under Section 300.415 of the NCP. Funds are required to begin Removal Actions pursuant to Section 104 of CERCLA as amended by 42 USC § 9604. The actions necessary to abate the threats at this site are anticipated to require less than 12 months and \$2 million for completion.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

The Site is a fenced three-acre property with three buildings located in a commercial area on N. Broad Street in Doylestown, Bucks County, PA. Two creeks, Pine Run and Cook Run, are within an approximate two-mile radius of the site. Drums were found outside on the eastern side of the property, inside of the Chem Fab building, and inside the Electronic Marketing Group (EMG) building.

EMG is a computer distributor and is still in business. The 50-foot underground storage tank was located on the western side of the Chem Fab building.

ORIGINAL
(Red)

B. Site Background

Chem Fab Corporation, a Delaware Corporation, is the current owner of the Site. Chem Fab Corporation is believed owned by Manfred DeRewal, Sr., who was the owner/operator of Revere Chemical and Boarhead Farms, both of which are Superfund sites that ranked on the National Priorities List.

On September 2, 1994, OSC George English met with Bucks County officials to collect information on Chem Fab Corporation, Reports of illegal dumping at the facility date back to 1973. The most recent report, dated June 1994, indicated the presence of abandoned drums and containers. A recent assessment conducted by the Pennsylvania Department of Environmental Resources (PADER) indicated the presence of hexavalent chromium in the soil at the Site.

On September 13, 1994, US EPA's National Enforcement Investigations Center (NEIC), US EPA's Criminal Investigations Division (CID) and FBI officials executed a ten-day search warrant at Chem Fab Corporation, for evidence of illegal disposal of hazardous materials at the facility. OSC English conducted a removal assessment and provided technical support to the criminal investigation. Criminal investigation activities included drum and soil sampling and excavation to verify the presence of an underground storage tank.

C. Quantities and Types of Substances Present

Approximately 100 drums and 1 underground storage container were found during the Removal Assessment and Criminal Investigation. Many were tentatively identified as containing flammable liquids and acids. Acid drums bore hazardous waste labels indicating that the waste was generated in the mid 1980's. Drums of methyl isobutyl ketone and hydrochloric acid were located on the Chem-Fab portion of the Site. These materials are defined as hazardous substances pursuant to CERCLA Section 101(14) and are listed in 40 CFR, Part 302.4 as hazardous substances.

A partially filled underground storage tank was discovered on the Chem Fab Corporation portion of the Site. Initial information indicates the tank was used to store chromic acid, which is defined and listed as a hazardous substance. The tank is of questionable integrity and may be leaking.

ORIGINAL
(Red)

It is suspected that hazardous substances stored on Site may be waste materials traditionally associated with wastes from other DeRewal-owned Superfund sites.

D. National Priorities

This site has not yet been reviewed for placement on the National Priorities List (NPL). The OSC will forward information obtained from the removal action to the site assessment section.

E. State and Local Authorities' Roles

PADER, Bucks County Emergency Services, and Doylestown Police and Fire Department have provided the OSC with background information concerning the Site. The OSC continues to coordinate Site activities with State and local officials.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

Section 300.415 of the NCP lists the factors to be considered in determining the appropriateness of a Removal Action. Paragraphs (b)(2) i, ii, iii, iv, v, vi, and vii of Section 300.415 directly apply as follows to the conditions at the Chem Fab Corporation, Site.

- A. 300.415 (b)(2)(i) "Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants."

The Chem Fab Corporation Drum Site is situated in a moderately-developed commercial/residential area on N. Broad Street in Doylestown, Bucks County, PA, where the threat of the possible release of hazardous substances into the environment may occur. The drums on the eastern side of the property are in continued exposure to the elements, which has accelerated their deterioration. Some of the hazardous substances found onsite consist of, but are not limited to, solvents (methyl isobutyl ketone), and acids (hydrochloric acid). Both methyl isobutyl ketone and hydrochloric acid are listed as CERCLA hazardous substances according to 40 CFR Part 302, Table 302.4. The potential exists for a catastrophic release or fire, resulting in the uncontrolled release of hazardous substances into the environment.

ORIGINAL
(Red)

- B. 300.415(b)(2)(ii) "Actual or potential contamination of drinking water supplies or sensitive ecosystems."

The section of Bucks County where Chem Fab Corporation is located has a shallow water table. Residents of Doylestown rely on groundwater for their potable water source. Local officials have identified several wells in close proximity to the facility. During the removal assessment, excavation activities revealed an underground storage tank containing an unknown substance. The bottom portion of this tank, which was reportedly used to store chromic acid, a hazardous substance, was surrounded by liquid. The probability that the contents of this tank are leaking is very high, which poses a potential threat to drinking water supplies.

Additionally, Pine Run and Cook Run are within approximately a two mile radius of the site. Contaminants which may migrate off-site via groundwater could have the potential to impact aquatic organisms.

- C. 300.415(b)(2)(iii) "Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release."

Currently, drums and containers of CERCLA listed hazardous substances are incompatibly and haphazardly stored on-site. The threat of release of these substances is compounded by the fact that the Chem Fab Corporation portion of the Site is vacant. Accidental or intentional release of these substances may occur due to incompatible chemical storage, fire, and/or through acts of vandalism.

Continual exposure to the elements has caused accelerated deterioration of drums containing CERCLA hazardous substances. No specifically designed secondary containment systems are installed to help contain a potential release from these containers.

The drums found inside of the EMG building had labels which dated to the mid 1980's. Due to the age of the drums, the integrity of the containers and stability of the contents are questionable. Several of these drums have been hand-labeled as "waste acid." Old manufacturer labels on the drums may not represent the actual contents.

During the Removal Assessment, an underground storage tank containing an unknown substance was uncovered. Information received by EPA indicated that this tank was used as a receptacle for chromic acid. The condition of this tank is not known.

- D. 300.415(b)(2)(iv) "High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate."

During excavation activities, an underground storage tank containing an unknown substance was uncovered. Since the condition of this tank is not known, a potential for the contents inside the tank to escape and impact the surrounding soils exists. Additionally, PADER soil analyses indicated high concentrations of hexavalent chromium. Chromium is listed as a CERCLA hazardous substance according to 40 CFR part 302, Table 302.4.

- E. 300.415(b)(2)(v) "Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;"

Drums are stored outside the facility in an unprotected area on the eastern side of the property. As the drums may corrode due to constant weathering and leak their contents on the ground, the potential of a release of hazardous substances exists.

- F. 300.415(b)(2)(vi) "Threat of fire and explosion;"

Drums of incompatible materials were found stored together inside and outside of the buildings. In the event of a fire, the reaction caused by these incompatible substances (flammables and acids) may cause an emergency threat to human health and the environment.

- G. 300.415(b)(2)(vii) "Availability of other appropriate federal or state response mechanisms to respond to the release."

PADER and local officials have requested the assistance of the U.S. EPA to mitigate the threats posed by this site.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances, pollutants, and contaminants from this Site, if not addressed by implementation of the response actions listed in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, and to the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Action Description

The planned Removal Action consists of the following activities:

- Contain and characterize any hazardous substances that have leaked from containers.
- Stabilize leaking and/or open containers.
- Characterize contents of drums and other containers.
- Properly contain/package hazardous materials on site.
- Segregate containers based on hazard category of contents.
- Stage containers for disposal.
- Sample and remove any contaminated soil.
- Address groundwater contamination, if any.
- Properly dispose of hazardous materials.

The proposed Removal Action is expected to run less than the statutory 12-month time limit for Removal Action, barring any unforeseen circumstances or disposal restrictions.

B. Estimated Costs

<u>Extramural Costs</u>	<u>Proposed Ceiling</u>
Regional Allowance Costs	
ERCS	\$ 467,000
20% Contingency	<u>93,400</u>
Subtotal	\$560,400
Other Extramural Costs not Funded from Regional Allowance	
TAT	<u>\$ 17,000</u>
Subtotal	\$ 577,400
20% Contingency	<u>3,400</u>
Total Extramural	\$ 580,800

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Intramural Costs

EPA Direct Costs	\$ 8,400
EPA Indirect Costs	<u>17,920</u>
Total Intramural	\$ 26,320
TOTAL PROJECT CEILING	\$ 607,120

C. Contribution to Remedial Performance

The Chem Fab Corporation Site is a not on the NPL, so there are currently no plans for long-term Remedial Action. The proposed Removal Action is consistent with accepted removal practices and is expected to abate the threats that meet the NCP removal criteria. The proposed action is not anticipated to impede future responses at this Site.

D. Compliance with ARARs

The proposed Removal Action will comply with all applicable, relevant, and appropriate environmental and health requirements (ARARs), to the extent practicable considering the exigencies of the situation. OSC has requested ARARs from PADER and will forward when received.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD NO ACTION BE TAKEN OR ACTION DELAYED

If no action is taken or action is delayed, the threat of a continued release of CERCLA hazardous substances, pollutants and contaminants and potential fire and explosion hazard increase as drums and containers fully exposed to the elements continue to deteriorate. Additionally, the structural integrity of the bulk underground storage container is questionable, and may be directly responsible for PADER-documented hexavalent chromium contaminated soil, and potential groundwater contamination.

VII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues pertaining to the Chem Fab Corporation Drum Site.

VIII. ENFORCEMENT

The EPA Removal Enforcement Section has been provided with all background information available to pursue any, and all enforcement actions pertaining to the Chem Fab Corporation Drum Site (see attached Confidential Enforcement Memorandum).

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IX. RECOMMENDATION

Because conditions at the Chem Fab Corporation Drum Site meet the criteria as set forth in Section 300.415 of the NCP for a Removal Action, I recommend your approval to authorize \$607,120 to abate the imminent threats to the public health and the environment, of which \$580,800 is for Extramural Costs. You may indicate your approval or disapproval by signing below.

APPROVED: 

DATE: 3/24/98

DISAPPROVED: _____

DATE: _____

Attachments: Confidential Enforcement Memorandum



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FEDERAL ON-SCENE COORDINATOR'S
AFTER ACTION REPORT
for
CHEM-FAB, INC.
DOYLESTOWN, BUCKS COUNTY, PA



UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION III
PHILADELPHIA, PENNSYLVANIA

AR000066

Federal On-Scene Coordinator's After Action Report
Chem-Fab, Inc.

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REGION III
CERCLA REMOVAL ACTION

PROJECT #373
FACT SHEET

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SITE: Chem-Fab, Inc.

SIZE: Approximately one acre

LOCATION: 300 N. Broad Street, Doylestown, Bucks County, Pennsylvania, 18901

APPROVAL DATE: 28 March 1994

PROJECT DATES: 2 September 1994 - 24 October 1995

DESCRIPTION: The Chem-Fab, Inc. Site is a one-acre property with three buildings located in a commercial area on N. Broad Street in Doylestown, Bucks County, Pennsylvania. The owner of the Site property is Chem Fab, Inc.; at this time the owner of Chem Fab, Inc. has not been traced. (However, Manfred DeRewel did initially hire Republic Environmental to handle drum removal/disposal.) Illegal dumping reports at the Site date back to 1973; as recent as June 1994, reports indicated the presence of abandoned drums and containers. In September of 1994, OSC George English conducted a Removal Assessment in conjunction with a Criminal Investigation. On 24 March 1995, funds were initiated for the EPA to stabilize the Site. Various tanks, drums, and containers of hazardous substances and wastes that were stored throughout the Site property were properly disposed.

HAZARDOUS MATERIALS: Inorganic acidic liquids and solids, caustic liquids and solids, poisonous solids, liquids, and gases, flammable liquids, radioactive material, polychlorinated biphenyls.

QUANTITIES REMOVED: 117 drums, approximately 8400 gallons of pumped liquid waste, approximately 250 gallons of fuel oil, 6 cubic yard boxes of solid waste, 3 cylinders.

OSCs: George English, Jack Owens

REMOVAL CONTRACTOR: Environmental Technologies, Inc., Earth Technology Remediation Services Richmond, Virginia

DISPOSAL LOCATIONS:

Battery Disposal Technologies
4255 Research Parkway
Clarence, New York 14031
(716) 634-6794

Chem-Waste Management
Alabama Highway 17
Mile-marker 163
Emelle, Alabama 33459
(205) 657-9521

Clean Harbors of Baltimore, Inc.
1910 Russel Street
Baltimore, Maryland 21230
(800) 645-8265

Clean Harbors of Natick, Inc.
12 Mercer Road
Natick, Massachusetts 01760
(800) 645-8265

Clean Harbors of Connecticut, Inc.
51 Broderick Rd.
Bristol, Connecticut 06010
(800) 842-1005

Ecolotec
636 North Irwin Street
Dayton, Ohio 45403
(800) 220-0267

E.I. DuPont DeNemours & Co.
Chambers Works
Route 130
Deepwater, New Jersey 08023
(609) 540-2773

ENSCO
309 American Circle
Eldorado, Arkansas 71730
(501) 863-7173

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Evergreen Environmental Group
33 Industry Drive
Bedford, Ohio 44146
(216) 786-7800

Laidlaw Pinewood Facility
Rt. 1, Box 255
Pinewood, South Carolina 29125
(803) 452-5003

North East Chemical Corporation
3301 Monroe Avenue
Cleveland, Ohio 44113
(800) 843-6322

Radiac Research Corporation
Barnwell Waste Management Facility
operated by: Chem-Nuclear Systems, Inc.
P.O. Box 726
Barnwell, South Carolina 29812
(803) 259-1781

Republic Environmental Systems (PA), Inc.
2869 Sandstone Drive
Hatfield, PA 19440
(215) 822-2676

Research Oil Company
2777 Broadway Avenue
Cleveland, OH 44115
(216) 623-8383

Trade Waste
7 Mobile Avenue
Sauget, Illinois 62201
(618) 271-2804

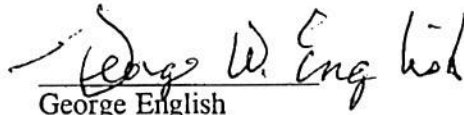
C.R. Warner, Inc.
Yankee Point Terminal
61st & West Passyunk Avenue
Philadelphia, PA 19153
(215) 726-5711

Waste Technology Industries (WTI)
1250 St. George Street
East Liverpool, OH 43920
(800) 403-4890

PROJECT CEILING: \$607,120

PROJECT COSTS: \$337,273

COMMENTS:


George English
On-Scene Coordinator

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Chem-Fab, Inc.
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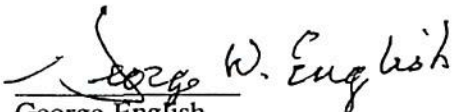
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FOREWORD

The On-Scene Coordinator (OSC), as mandated by the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300 (NCP 1994), is required to provide a coordinated federal response capability at the scene of an unplanned or sudden discharge of oil or hazardous substance that poses a threat to the public health or the environment. In addition, the provisions of Section 104 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), promote a coordinated federal, state and local response to mitigate situations at hazardous waste sites that pose an imminent and substantial threat to public health and/or the environment.

The Chem-Fab, Inc. Site represented an imminent and substantial risk of harm to human health and the environment due to the uncontrolled release of a hazardous substance to the environment, thereby providing a legal basis for federal response activities. The provisions of the NCP, Section 300.415, were implemented by the U.S. Environmental Protection Agency, Region III, Philadelphia, Pennsylvania.

The OSC would like to extend thanks to all of the agencies and individuals who provided valuable assistance and expertise to ensure the successful completion of this cleanup effort.


George English
On-Scene Coordinator
U.S. EPA Region III
Philadelphia, Pennsylvania

I. INTRODUCTION

A. Initial Situation

EPA received an Incident Notification Report in June of 1994 from an anonymous caller abandoned drums and containers were being stored at 300 N. Broad Street in Doylestown, Bucks County, Pennsylvania. Bucks County Department of Health records indicated a history of illegal dumping at this property, dating back to 1973. The Pennsylvania Department of Environmental Resources (PADER) provided previous Site assessment information, including soil data, indicating elevated levels of hexavalent chromium. OSC English responded to the Incident Report and met with members of The Bucks County Emergency Management Agency, Bucks County Department of Health, and the Doylestown Assistant Fire Marshall on 1 and 2 September 1994, to discuss Site history and potential future actions. Site response was delayed due to problems identifying a PRP to gain access. On 13 September 1995, OSC English accessed the Site to search for evidence of storage and/or disposal of hazardous substances. Site access for EPA was initiated through a ten-day search warrant, in conjunction with agents from Criminal Investigation Division (CID), NEIC, U.S. Federal Bureau of Investigations (FBI), and U.S. Drug Enforcement Agency (DEA). Based on the results of EPA's investigation, and analytical results of EPA-NEIC drum and tank sampling efforts, CERCLA funds were allocated to address the existent threats to human health and the environment.

B. Site Location

Chem-Fab, Inc. is located at 300 N. Broad Street in Doylestown, Bucks County, Pennsylvania. The one-acre parcel of land contains three separate buildings, where various business ventures have operated. The Site is bordered to the East by an operating business, and to the West and South by an active storage facility. The north face of the property is bordered by N. Broad Street. Directly across the street from Chem-Fab, Inc. is an operating newspaper agency.

C. Efforts to Obtain Cleanup from Potentially Responsible Parties

Due to the fact that EPA's Criminal Investigation Department, EPA-NEOC, FBI, and DEA were conducting joint investigations at the Chem-Fab, Inc. Site, information pertaining to potentially responsible parties was considered sensitive. The owner of the Site property is Chem Fab, Inc.; the owner of this corporation has not been determined, but it is believed that Manfred DeRewel, Sr. (owner/operator of Boarhead Farms NPL Superfund Site and Revere Chemical Superfund Site) and his son, Fred DeRewel, Jr., are associated with the property and business operations on Site.

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II. ROSTER OF AGENCIES, ORGANIZATIONS, AND INDIVIDUALS

A. Names and Addresses

AGENCY	CONTACT	BRIEF DESCRIPTION OF DUTIES
FEDERAL AGENCIES		
U.S. EPA Region III CERCLA Removal Section 841 Chestnut Building Philadelphia, PA 19107 (215) 597-9800	George English, OSC Jack Owens, OSC	Coordinated all site stabilization and removal activities.
U.S. EPA Region III CERCLA Removal Section 841 Chestnut Building Philadelphia, PA 19107 (215) 597-9800	Joanna McDonald, FAS	Assisted the OSC's with cost tracking and administrative duties.
U.S. EPA Region III CERCLA Removal Section 841 Chestnut Building Philadelphia, PA 19107 (215) 597-9800	Andrew Duchovnay, ORC	Coordinated legal issues between the OSC and the PRP.
U.S. EPA Region III Criminal Investigation Department (CID) 841 Chestnut Building Philadelphia, PA 19107 (215) 597-9800	Rick Shapiro, Special Agent Mike Shumaker, Special Agent Dave Dillon, Special Agent Mike Byrnes, Special Agent Robert Boodey, Special Agent Lisa Wild, Special Agent	Conducted EPA criminal investigations on site.
EPA-NEIC Building 53 Federal Center Denver, CO 80225 (303) 236-3636	Joyce Kopatch Jackie Miller Bruce Binkley Al Bandur	Conducted sampling and air monitoring during initial site inspection.
United States Drug Enforcement Agency (DEA) Federal Building 600 Arch Street - Room 10224 Philadelphia, PA 19107 (215) 597-9530		On site to aid OSC during preliminary investigations.
United States Federal Bureau of Investigation (FBI) 600 Arch Street Philadelphia, PA 19107	Albert Sproule, Special Agent	On site to aid OSC during preliminary investigations.

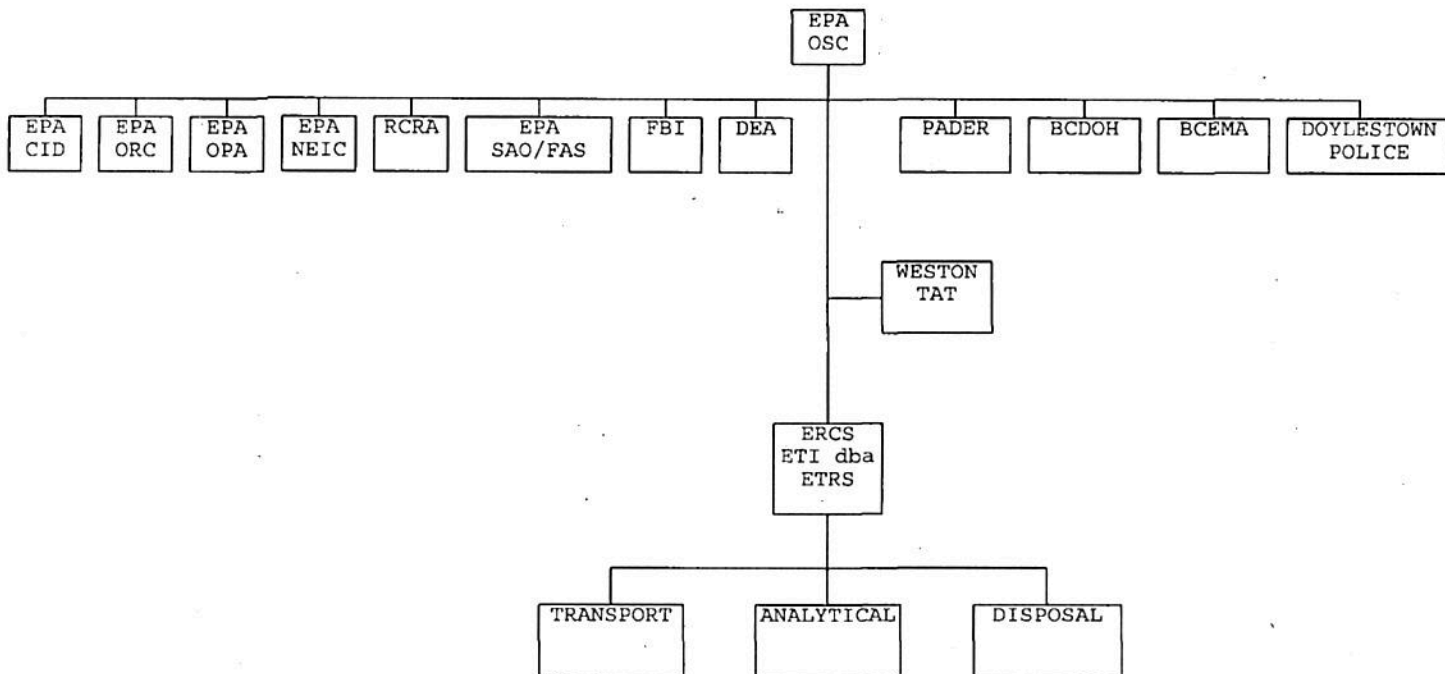
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AGENCY	CONTACT	BRIEF DESCRIPTION OF DUTIES
STATE AGENCIES		
Pennsylvania Department of Environmental Resources (PADER) (now PADEP) PO BOX 2063 Harrisburg, PA 17105 (717) 772-3314		Assisted OSC with State ARARs and emergency coordination.
COUNTY AGENCIES		
Bucks County Department of Health 50 North Main Street Doylestown, PA 18901 (215) 345-3318	Peter Knoll, (title)	Provided background information and assisted OSC with emergency coordination.
Bucks County Emergency Management Agency 50 North Main Street Doylestown, PA 18901 (215) 348-7518	John Dougherty, EMA Coordinator	Provided background information and assisted OSC with emergency coordination.
Doylestown Borough Police 57 West Court St. Doylestown, PA 18901 (215) 345-4143		Provided background information and provided periodic drive-by security checks.

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B. Organization of the Response



C. Glossary of Abbreviations and Definitions

BCDOH	Bucks County Department of Health
BCEMA	Bucks County Emergency Management Agency
BNA	base/neutral/acid
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CID	Criminal Investigation Division
dba	Doing Business As
DEA	U.S. Drug Enforcement Agency
DOT	Department of Transportation
EPA	U.S. Environmental Protection Agency
ERCS	Emergency Response Clean-up Services
ERNS	EPA Emergency Response Notification System
ETI	Environmental Technologies of North America, Inc.
ETRS	Earth Tech Remediation Services
FAS	EPA Field Administrative Specialist
FBI	U.S. Federal Bureau of Investigation
NCP	National Oil and Hazardous Substances Contingency Plan
NOS	Not Otherwise Specified
OPA	EPA Office of Public Affairs
ORC	EPA Office of Regional Council

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ORM	Other Regulated Material
OSC	EPA On-scene Coordinator
PADER	Pennsylvania Department of Environmental Resources
PADEP	Pennsylvania Department of Environmental Protection
PPE	Personal Protective Equipment
PPB	Parts Per Billion
PPM	Parts Per Million
PRP	Potentially Responsible Party
RCRA	Resource Conservation and Recovery Act
RM	ERCS Response Manager
RP	Responsible Party
SARA	Superfund Amendment and Reauthorization Act
TAT	Roy F. Weston, Inc., Technical Assistance Team
TCLP	Toxic Characteristics Leachate Procedure
uR/hr	Micro-Roentgen per hour
VOA	Volatile Organics Analysis

III. NARRATIVE OF EVENTS

Based on an anonymous report that drums and miscellaneous containers were stored at the vacated Chem-Fab facility at 300 North Broad Street in Doylestown, Bucks County, Pennsylvania, an ERNS Incident Notification Report was filed on 27 June 1994.

Initial research of potential Site PRP's indicated that Manfred DeRewel, Sr. was associated with the site, and due to his association with other Superfund sites, as well as various alleged criminal activities, CID, FBI, and DEA were consulted.

OSC English and Roy F. Weston Technical Assistance Team (TAT) members met with Bucks County Health Department officials and Bucks County Hazardous Materials representatives on 1 and 2 September 1994 to gather background information on the Chem-Fab Site. Health Department records indicated reports of illegal dumping at the site dating back to 1973. Information was shared that PADER had collected soil samples on site that showed elevated levels of hexavalent chromium. Difficulty with identifying and contacting the PRP delayed access to the site.

Another meeting was held on 12 September 1994, attended by OSC English, TAT members, FBI, EPA-NEIC, and CID representatives and the Doylestown Police, to discuss an upcoming Federal Investigation of the Chem-Fab Site. A warrant was prepared to facilitate a Federal site inspection be conducted by EPA, CID, FBI, DEA and NEIC officials. On 13 September 1994, the warrant was served at the Chem-Fab Site, and EPA, TAT, NEIC, CID, DEA, and FBI began the inspection. NEIC inventoried and sampled drums, and photodocumented Site conditions. The site inspection continued on the 14th and 15th of September 1995. Excavation operations uncovered a buried tank that appeared to be leaking, approximately 50 feet in length, and approximately half full of a yellowish liquid. Also, several areas of cement floor were removed during the location of drains and/or ports, possibly used for disposal of chemicals.

On 1 October 1994, OSC English tasked TAT members to observe CID operations and to

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provide background information for a draft Action Memorandum. A finalized Action Memorandum/Funding Request was approved on 28 March 1995, which allocated \$607,120 to address the threats posed by the chemicals stored at the Chem-Fab Site. During the week of 19 March 1995, OSC English obtained permission to assess the Site, collect samples, and conduct site-stabilization efforts, although no removal operations were to occur.

After receiving permission to access the Chem-Fab Site from Manfred DeRewel, Sr., OSC English scheduled a site assessment. On 3 April 1994, OSC English met with TAT members at the Chem-Fab Site, where access to the Site was provided by "a friend of the DeRewel family". Assessment results confirmed the presence of more than 100 drums, as well as several tanks and small containers on site. These containers were stored in an office building, a warehouse, an unoccupied residence, two trailers, and in parking lot and yard areas. Label information on various drums, tanks, and containers indicated storage of xylene, toluene, hydrochloric acid, sulfuric acid, nitric acid, muriatic acid, caustic soda, methyl isobutyl ketone, polymeric isocyanate, benzene sulfonic acid, nickel rinse waste, methylene chloride, ferric chloride, chromate, and waste acid. Two cylinders in extremely poor condition were discovered in the warehouse building labeled "anhydrous ammonia".

On 4 May 1995, OSC English issued a Delivery Order (DO) to the ERCS contractor for sampling and stabilization of materials stored at Chem-Fab. Site stabilization operations began on 8 May 1995. OSC English, ORC Duchovnay, TAT, and ERCS members toured the Site to discuss operational plans, and found that many of the drums had been moved into the main room of the office building, many with their bungs removed. Chem-Fab Vice President Cheryl James arrived on site and explained that Chem-Fab had hired Republic Environmental as their clean-up contractor, and they had already begun drum sampling operations the previous weekend. ORC Duchovnay informed Ms. James that in order for a PRP contractor to begin work, a consent order must first be drafted and signed, prior to issuance and approval of a work plan.

Stabilization operations continued throughout May of 1995, with ERCS contractors re-staging, inventorying, and sampling all drums and small containers. Hazard-categorization tests were performed on all samples, and chemicals were grouped into waste streams for future disposal. Drums of questionable integrity were subsequently overpacked into recovery drums. The contents of the buried 50-foot tank were sampled, and analytical results confirmed the presence of hexavalent chromium. TAT members collected soil samples at depths of 4-6 feet, from areas immediately surrounding the buried tank, and shipped samples off site to be analyzed for Volatile Organics Analysis (VOA), base/neutral/acid (BNA), total metals, and hexavalent chromium.

In June of 1995, ERCS contractors continued efforts to stabilize the Site. Empty drums and small containers above 5-gallon capacity were transported off site for recycling. Cubic-yard boxes were utilized to package small containers and waste solids for off site transport and disposal. Five exploratory holes were completed around pipes and drains in the warehouse building. Soil samples were collected from each hole prior to backfilling, and shipped for VOA analysis. During operations, one drum containing three 16-ounce containers of radioactive thorium nitrate was discovered. Readings at the surface of these containers were at 2,500 uR/hr. Readings from 20 feet when containers were encased in a steel drum were between 25-30 uR/hr, as compared to background radiation levels of 15-20 uR/hr..

On Monday, 5 June 1995, scheduled pumping, transporting, and disposing of waste from the

buried tank was postponed, due to a reported problem that the disposal company had with treatment of disposal samples. On Thursday, 15 June 1995, approximately 8,400 gallons of liquid waste (D007, D002) was pumped from the buried tank, and transported off site for disposal at the Research Oil Co. in Cleveland, Ohio. Site personnel demobilized following disposal operations.

On 29 August 1995, OCS, TAT, and ERCS personnel mobilized to the site to conduct transportation and disposal of remaining wastes on Site. Due to discrepancies with analytical results from drum disposal samples, the bid-winning disposal company refused to accept a portion of the drummed wastes. An additional company was solicited by ERCS to dispose of these drums. Disposal of 117 drums, 250 gallons of fuel oil, 6 cubic yard boxes of solid waste, and one cylinder was conducted between 29 August and 1 September 1995.

IV. RESOURCES COMMITTED

A. Initial Funding Request

The Regional Administrator approved funding for the Site on 28 March 1994, with a ceiling of \$607,120.

B. Additional Funding Request

No request for a ceiling increase was necessary.

C. Estimated Total Cost Summary

1. Extramural

ERCS (ETI dba ETRS)	\$ 275,861
TAT	<u>\$ 49,890</u>
Extramural Subtotal	\$ 325,751

2. Intramural

EPA (Direct)	\$ 3,778
EPA (Indirect)	<u>\$ 7,744</u>
Intramural Subtotal	<u>\$ 11,522</u>

ESTIMATED TOTAL PROJECT COSTS \$337,273

PERCENT OF PROJECT CEILING EXPENDED = 55.6%

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V. EFFECTIVENESS OF THE REMOVAL

A. Activities of the Various Agencies

1. Potentially Responsible Parties

The Potentially Responsible Party for this Site was identified as Chem-Fab, Inc. Initial actions taken by Manfred DeRewel, Sr. and/or Fred DeRewel, Jr., representing Chem-Fab, Inc., included hiring a contractor to sample drums for future disposal. No further clean-up actions were taken by the PRP, and no information regarding the chemicals stored on site was provided by the PRP. No other PRPs were identified.

2. Federal Agencies

The oversight of this project was coordinated by the U.S. EPA Region III, Superfund Removal Branch. George English and Jack Owens served as Federal On-Scene Coordinators of the project and directed all removal activities. OSCs English and Owens closely coordinated with special agents from CID, NEIC, FBI, and DEA, who were conducting independent investigations.

EPA-NEIC assisted the OSCs during initial Site investigations; multimedia sampling was conducted and laboratory analysis was provided.

ORC Andrew Duchovnay addressed the legal issues and concerns associated with the Site. FAS McDonald assisted the OSCs with contractor issues, Site cost-tracking functions, and various administrative duties.

3. State and Local Agencies

The Pennsylvania Department of Environmental Resources (PADER), Bucks County Emergency Management, Bucks County Department of Health, and the Doylestown Police Department aided the OSC by providing Site background information and technical support. The Doylestown Police Department also conducted periodic drive-by inspections of the Site.

4. Contractors

The Roy F. Weston, Inc., Technical Assistance Team (TAT) was responsible for site safety, progress monitoring, and site documentation. TAT advised the OSCs on technical issues and provided air monitoring, radiation monitoring, soil sampling, and data review and validation.

Environmental Technology, Inc. (ETI) doing business as (dba) Earth Tech Remediation Services (ETRS), served as the primary contractor under the Emergency Response Clean-up Services (ERCS) mechanism. ETI was responsible for providing the manpower and equipment necessary to complete the project. ERCS also provided and supervised subcontractor services including site security, laboratory analysis, and the transportation and disposal of hazardous waste.

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B. Analytical Synopsis

Sampling of all drums, tanks, and small containers was conducted for disposal parameters. Soil samples were collected at intermediate depths surrounding the buried tank, and analyzed for volatile organics, total metals, base-neutral extractables, and hexavalent chromium. Soil/water samples were collected from excavated sumps/ports inside the Chem-Fab warehouse building, and analyzed for total oil/grease. Detailed analytical reports of the contaminants identified can be referenced in the Chem-Fab Site file, stored at the EPA Region III Central File Room, Philadelphia, Pennsylvania.

C. Disposal Methods and Quantities Removed

Table 1 provides detailed manifest information of materials that were disposed of from the Chem Fab, Inc. Site. Actual manifests can be referenced in the Site file, stored at EPA Region III Central File Room, Philadelphia, Pennsylvania.

TABLE 1 - DISPOSAL METHODS AND QUANTITIES REMOVED

STATE DOCUMENT NUMBER	DATE SHIPPED	ESTIMATED QUANTITY	MATERIAL	DISPOSAL FACILITY	DISPOSAL METHOD
PAE2974473	06/15/95	4900 gal	RQ Hazardous Waste Liquid, N.O.S., 9, UN3082, PG III, D007, D002 (Chromium)	Research Oil Company Cleveland, Ohio	Treatment
PAE2974495	06/15/95	3500 gal	RQ Hazardous Waste Liquid, N.O.S., 9, UN3082, PG III, D007, D002 (Chromium)	Research Oil Company Cleveland, Ohio	Treatment
PAE4257584*	08/29/95	4 drums	RQ Waste Corrosive Solids, N.O.S., 8, UN1759, PG III, D004.	Ecoteq Dayton, Ohio	Stabilization/ Landfill
PAE4259850		25 drums	RQ Waste Flammable Liquids, N.O.S., 3, UN1993, PG III, D001.	North East Chemical Corporation Cleveland, Ohio	Fuel Blending
PAE4253723		2 drums	Corrosive Solids, N.O.S., 8, UN1759, PG III, Acidic Solids.	Evergreen Environmental Group Bedford, Ohio	Stabilization/ Landfill
PAE4257621*	08/29/95	1 drum	RQ Waste Flammable Liquids, N.O.S., 3, UN1993, PG III, D001.	North East Chemical Corporation Cleveland, Ohio	Fuel Blending
PAE4254810		1 drum	RQ Waste Caustic Alkali Liquid, N.O.S., 8, UN1719, PG III, D002.	E.I. DuPont DeNemours & Co. Deepwater, New Jersey	Treatment
NJA2005356		1 drum			
PAE4257610*	08/29/95	1 drum	RQ Waste Caustic Alkali Liquid, N.O.S., 8, UN1719, PG II, D002 (Alkanol amine, Potassium Hydroxide).	E.I. DuPont DeNemours & Co. Deepwater, New Jersey	Treatment
NJA2005356		1 drum	Waste Potassium Hydroxide, Solution, 8, UN1814, PG II, D002.	E.I. DuPont DeNemours & Co. Deepwater, New Jersey	Treatment
PAE4253723		3 drums	Waste Isopropanol, 3, UN1219, PG II, D001.	North East Chemical Corporation Cleveland, Ohio	Fuel Blending

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STATE DOCUMENT NUMBER	DATE SHIPPED	ESTIMATED QUANTITY	MATERIAL	DISPOSAL FACILITY	DISPOSAL METHOD
PAE4257595*	08/29/96	1 drum	RQ Waste Corrosive Liquid, Basic, Inorganic, N.O.S., 8, UN3266, PG III, D002 (Sodium Hydroxide, Arsenic).	E.I. DuPont DeNemours & Co. Deepwater, New Jersey	Treatment
NJA2005421		1 drum	RQ Waste Corrosive Liquid, Acidic, Inorganic, N.O.S., 8, UN3264, PG III, D002 (Cadmium, Chromium).	E.I. DuPont DeNemours & Co. Deepwater, New Jersey	Treatment
NJA205409		9 drums	RQ Hazardous Waste, Liquid, N.O.S., 9, NA3082, PG III, D004 (Arsenic, Lead).	E.I. DuPont DeNemours & Co. Deepwater, New Jersey	Treatment
NJA2005421		3 drums	RQ Waste Corrosive Liquid, Basic, Inorganic, N.O.S., 8 UN3266, PG III, D002 (Sodium Hydroxide, Potassium Hydroxide).	E.I. DuPont DeNemours & Co. Deepwater, New Jersey	Treatment
PAE4257864*	08/29/95	6 cubic yard boxes	RQ Hazardous Waste Solid, N.O.S., 9, NA3077, PG III, D004 (Arsenic, Benzene).	Waste Technology Industries East Liverpool, Ohio	Incineration
MDC0553644** IL6441914	09/01/95	1 drum	RQ Waste Potassium Cyanide, 6.1, UN1680, PG I.4	Trade Waste Sauget, Illinois	Incineration
MDC0551453** AR753392 AR753392 AR753380 & AR623252	08/31/95	22 drums 17 drums 18 drums	RQ Waste Flammable Liquids, Corrosive, N.O.S., 3, UN2924, PG III (Xylene, Hydrochloric Acid). RQ Waste Flammable Liquids, Corrosive, N.O.S., 3, UN2924, PG III (Benzene, Hydrochloric Acid). RQ Waste Corrosive Liquid, N.O.S >, 8, UN1760, PG III (Nitric Acid).	ENSCO Eldorado, Arkansas ENSCO Eldorado, Arkansas ENSCO Eldorado, Arkansas	Incineration Incineration Incineration
CTF0360701	08/31/95	1 drum	Waste Hydrogen Peroxide, Aqueous Solutions, 5.1, UN2014, PG II.	Clean Harbors of Connecticut, Inc. Bristol, Connecticut	Wastewater Treatment

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STATE DOCUMENT NUMBER	DATE SHIPPED	ESTIMATED QUANTITY	MATERIAL	DISPOSAL FACILITY	DISPOSAL METHOD
MDCO551456** CTF03461347	08/30/96	1 drum	Waste Oxidizing Substances, Solid, N.O.S., 5.1, UN2014, PG II (Sodium Dichromate).	Clean Harbors of Connecticut, Inc.	Treatment
IL66256045		1 drum	Waste Boron Tribromide, 8, UN5692, PG I, Poisonous by Inhalation, Zone 13.	Bristol, Connecticut Trade Waste	Incineration
IL6626045		1 drum	Waste Poisonous Solid, N.O.S., 6.1, UN2811, PG II, (Thiourea).	Sauget, Illinois Trade Waste	Incineration
02505		1 drum	RQ Environmentally Hazardous Substance, Liquid, N.O.S., 9, UN3082, PG III, (Asbestos).	Sauget, Illinois Laidlaw Pinewood, South Carolina	Landfill
MAH728800*** CWMA762926	08/30/95	1 drum	RQ Polychlorinated Biphenyls, 9, UN2315, PG II.	Chem-Waste Management Emelle, Alabama	Landfill
NYB5071851		1 cylinder	Nitrogen, 2.2, UN1066.	Battery Disposal Technologies Clarence, New York	Treatment
No Manifest #	08/29/95	1 drum	Radioactive Thorium Nitrate solidified in concrete.	Barnwell Waste Management Facility Barnwell, South Carolina	Landfill
No Manifest #	10/24/95	2 cylinders	Anhydrous Ammonia.	Tanner Industries, Inc. Philadelphia, Pennsylvania	Recycling
No Manifest #	08/30/95	Bulk liquid	Combustible Liquid, N.O.S., NA1993, PG III, (Used Motor and Fuel Oil).	C.R. Warner, Inc., Philadelphia, Pennsylvania	Fuel Blending

*Intermediate disposal facility: Republic Environmental Hatfield, PA

**Intermediate disposal facility: Clean Harbors of Baltimore Baltimore, MD

***Intermediate Disposal facility: Clean Harbors of Natick, Inc. Natick, MA

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VI. CHRONOLOGY OF EVENTS

THURSDAY, SEPTEMBER 01, 1994

OSC English met with Bucks County officials to discuss Chem-Fab, Inc. Site history.

FRIDAY, SEPTEMBER 02, 1994

OSC and TAT personnel met with Bucks County Health Department, Assistant Fire Marshall, and Bucks County Haz-mat officials and discussed the Chem-Fab, Inc. Site.

MONDAY, SEPTEMBER 12, 1994

OSC, CID, and TAT met at Willow Grove Residence Inn to discuss Chem-Fab, Inc. Site plans. A warrant was sealed for EPA/CID to conduct a joint inspection of Chem-Fab, Inc. property, and to conduct a search for storage of hazardous substances and/or wastes.

TUESDAY, SEPTEMBER 13, 1994

OSC, TAT, EPA-NEIC, CID, and FBI were on site at Chem-Fab, Inc. EPA-NEIC began sample collection from drums stored on site.

WEDNESDAY, SEPTEMBER 14, 1994

OSC, TAT, EPA-NEIC, CID, and DEA were on site to continue execution of warrant. EPA-NEIC continued drum sampling operations. Excavation on site uncovered a buried 50-foot tank approximately half-full of an unknown liquid.

THURSDAY, SEPTEMBER 14, 1994

OSC, TAT, EPA-NEIC, CID, and DEA were on site to continue execution of warrant. EPA-NEIC completed drum sampling operations. Contractors jackhammered areas of concrete floor surrounding ports and sumps inside the warehouse building.

WEDNESDAY, FEBRUARY 08, 1995

An Action Memo/Funding Request was submitted to the Regional Administrator for approval.

WEEK OF MARCH 26, 1995

Through a telephone conversation with OSC English, Manfred DeRewel, Sr. granted EPA access to the Chem-Fab, Inc. Site, and stated that his son, Manfred DeRewel, Jr., would be on site to unlock the gates and doors on April 3, 1995.

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MONDAY, APRIL 03, 1995

OSC and TAT were on site to conduct a site inspection in preparation for site stabilization, sampling, and future removal actions. A "friend" of Manfred DeRewel, Sr. was on site to open the gates and locks, and remained on site until the inspection was completed.

MONDAY, MAY 08, 1995

OSC, TAT, ERCS, and Regional Council were on site to begin stabilization operations. Chem-Fab, Inc. Vice President Cheryl James arrived on site and informed OSC English that Republic Environmental had been contracted to handle the site clean-up, and had begun sampling operations and had restaged many drums. Regional council informed Ms. James that a consent order must be signed and EPA must approve of a contractor prior to clean-up efforts commencing. Initial air and radiation monitoring showed no levels above background.

TUESDAY, MAY 09, 1995

ERCS continued site stabilization operations, and drums were re-staged based on compatibility.

WEDNESDAY, MAY 10, 1995

ERCS continued site stabilization operations. ERCS collected a liquid sample (pH=3) from the buried tank. The OSC issued a letter explaining site access details to EPA Section Chief Gregg Crystall.

THURSDAY, MAY 11, 1995

ERCS replaced RM Farrell with RM Keegan. ERCS began a detailed inventory of drums, tanks, and small containers. Samples collected from the buried tank were shipped to a laboratory.

FRIDAY, MAY 12, 1995

ERCS acquired and set-up equipment for site stabilization operations. The inventory of tanks, drums, and small containers continued.

MONDAY, MAY 15, 1994

ERCS set up a designated haz-cat area, and the ERCS chemist began haz-cating drum samples. Drum sampling and overpacking operations began.

TUESDAY, MAY 16, 1995

ERCS continued drum sampling and haz-cating operations, and overpacked drums as necessary. A leaking roof in the Chem-Fab warehouse was repaired to prevent potential reaction of water with stored chemicals. CID Rick Shapiro was on site to discuss site operations. Kelly Security was on site to begin

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security operations.

WEDNESDAY, MAY 17, 1995

Drum sampling, haz-cattng, and overpacking operations continued. On-site fuel tanks were inventoried for product and/or sludges. ERCS began removing drums from the two over-the-road (OTR) trailers on site. Heavy rains hindered Site operations this date.

THURSDAY, MAY 18, 1995

ERCS began clearing miscellaneous debris from the warehouse. Haz-cattng of drum samples was completed, and ERCS began identifying/inventorying small containers from designated pallets. TAT personnel received the EPA Generator ID #PAD002323848 from EPA Lois Lauria. A rental office trailer was delivered to site.

FRIDAY, MAY 19, 1995

Clearing of warehouse debris, drum overpacking, and small container inventory operations continued. Two heavy duty electric service lines were discovered to originate in the Chem-Fab warehouse, and lead to other buildings site. The OSC informed CID Rick Shapiro, who traveled to site and inspected the suspect wiring. As directed by Shapiro, TAT photodocumented the suspect electrical wiring.

MONDAY, MAY 22, 1995

Analytical results from samples of the buried tank contents were received. ERCS worked on re-staging overpacked drums.

TUESDAY, MAY 23, 1995

CID special agents Shumaker and Shapiro were on site to discuss operations. Empty containers were removed from the attic of the computer building on site, and two containers of solids were discovered. ERCS crushed empty glass containers removed from the attic.

WEDNESDAY, MAY 24, 1995

Level B bulking operations began. During bulking, drum #FFF, which was known to contain both organic liquids and isocyanate foam part A, showed signs of an exothermic reaction. The contents of this drum eventually formed solids. Two other drums containing similar materials were vented as a precautionary measure. During operations, a 30-gallon drum containing acids fell off a forklift and leaked. The drum was immediately uprighted, and the spill was cleaned.

THURSDAY, MAY 25, 1995

During continued bulking operations, one drum began fuming violently, off-gassing a red-brown vapor. TAT air monitoring efforts showed that the red-brown vapors were acidic and extremely oxidizing.

TAT collected soil samples from areas surrounding the buried tank, at depths between four and six feet; samples were delivered to a local laboratory.

FRIDAY, MAY 26, 1995

ERCS chemist completed compositing drum samples. Bulked drums were staged inside the Chem-Fab warehouse. Bulking of solid materials began.

TUESDAY, MAY 30, 1995

TAT delivered the site file to ORC Duchovnay at EPA, Philadelphia, for a FOIA request. During inventory operations, drum #III was noted to be bulging, and was vented. Overpacking and re-staging of drums continued. Consolidation of drums continued.

WEDNESDAY, MAY 31, 1995

ERCS excavated with hand tools areas around several ports and sumps in the Chem-Fab warehouse, revealing oily black soils and seeping oily liquids. ERCS collected samples from excavation areas, and shipped them off-site for laboratory analysis. Air monitoring results indicated elevated levels of volatile organics. Drum consolidation operations were completed on this date. Research Oil (Cleveland, Ohio) was selected for disposal of buried tank contents.

THURSDAY, JUNE 01, 1995

ERCS loaded 155 empty drums into a box trailer for transport off-site to be recycled and/or disposed of. Empty small containers were rinsed, cut, and crushed for disposal. Cubic yard boxes were delivered to site this date. Liquid from ferric chloride tanks in the warehouse (Ph=0, strong oxidizer) was pumped into drums containing nitric acid. Air monitoring results showed drum #III to be emitting oxidizing vapors, and was removed from the warehouse for venting. TAT completed a compliance check of Research Oil (Cleveland, Ohio).

FRIDAY, JUNE 02, 1995

Loading of small containers and other inert debris into cubic yard boxes continued. After conferring with CID, the OSC directed ERCS to cut a hole in the top of the buried tank to facilitate access for pump hoses. Drum samples were shipped to a laboratory for disposal analysis. Three containers of gamma-radioactive thorium nitrate were discovered in drum #PP. In addition, drum #QQQ was discovered to be 1.8 to 2-times background for gamma radiation levels. ERCS prepared for Site demobilization.

MONDAY, JUNE 12, 1995

Chromic acid waste in the buried tank was scheduled to be transported off site for disposal, however, at 0830 hours, ERCS informed the OSC that Research Oil had canceled arrangements for today. ERCS reported that Research Oil had left a message on Friday, June 09, 1995, stating that

transport and disposal of tank waste would not occur as scheduled due to treatment problems with elevated levels of chromium in the disposal samples. Two technicians were sent home due to the last-minute disposal cancellation, and the OSC informed ERCS that their hours for today would not be billable to the project. The OSC and TAT met to discuss future removal and disposal plans for the site.

THURSDAY, JUNE 15, 1995

Frank's Vacuum Service trucks pumped out the contents of the buried tank, and hauled the liquid chromic acid waste for Research Oil. Two trucks transported waste off site, one containing approximately 4,900 gallons, the second containing approximately 3,500 gallons. All pumpable product was removed from the buried tank. The computer building was inaccessible, because the ERCS' key no longer operated the doorknob lock.

TUESDAY, AUGUST 29, 1995

Republic Environmental (solicited by ERCS) was on site to conduct transportation and disposal of 52 drums (Manifest #'s: PAE 4257584, PAE 4257621, PAE 4257610, & PAE 4257595). In addition, Republic transported 6yd³ boxes of debris off site for disposal (Manifest #: PAE 4257864). Clean Harbors was on site to sample the remainder of the drums, which Republic Environmental had declined to handle, reportedly due to discrepancies with disposal sample analytical results. Radiac, Inc., solidified the radioactive waste on site using cement, and transported the one drum off site for disposal.

WEDNESDAY, AUGUST 30, 1995

C.R. Warner, Inc. was on site to pump out 250 gallons of fuel oil from site tanks and to transport it off site for disposal. TAT reviewed soil sample analytical results and due to trace amounts of contaminants present, suggested that further sampling occur at depths that would be more representative of soil potentially affected by the buried tank leakage. Clean Harbors was on site to transport five drums and one cylinder off site for disposal. (Manifest #'s: MAH 728800, MDC 0551456)

THURSDAY, AUGUST 31, 1995

ERCS vented a bulging drum of hydrogen peroxide, which was then transported off site for disposal by Clean Harbors (Manifest #: CTF 0360701). Clean Harbors also transported an additional 57 drums off site for disposal (Manifest #: MDC 0553644).

FRIDAY, SEPTEMBER 01, 1995

Clean Harbors transported the last remaining drum off site for disposal (Manifest #: MDC 0553644).

TUESDAY, OCTOBER 24, 1995

Tanner Industries, Inc., Philadelphia, was on site to transport and dispose of two cylinders of anhydrous ammonia (no manifest).

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VII. PROBLEMS ENCOUNTERED AND RECOMMENDATIONS

Although Site work was temporarily hindered due to minor set-backs, no significant problems were encountered throughout the course of this removal effort. Project commencement was delayed due to problems in identifying and gaining access to the site from a PRP. In addition, much of the initial information was unavailable, as confidential investigations of parties involved with the Site were being conducted. Minor difficulties and delays in arranging proper transportation and disposal of Site wastes were experienced, due to the complexity of several waste streams.

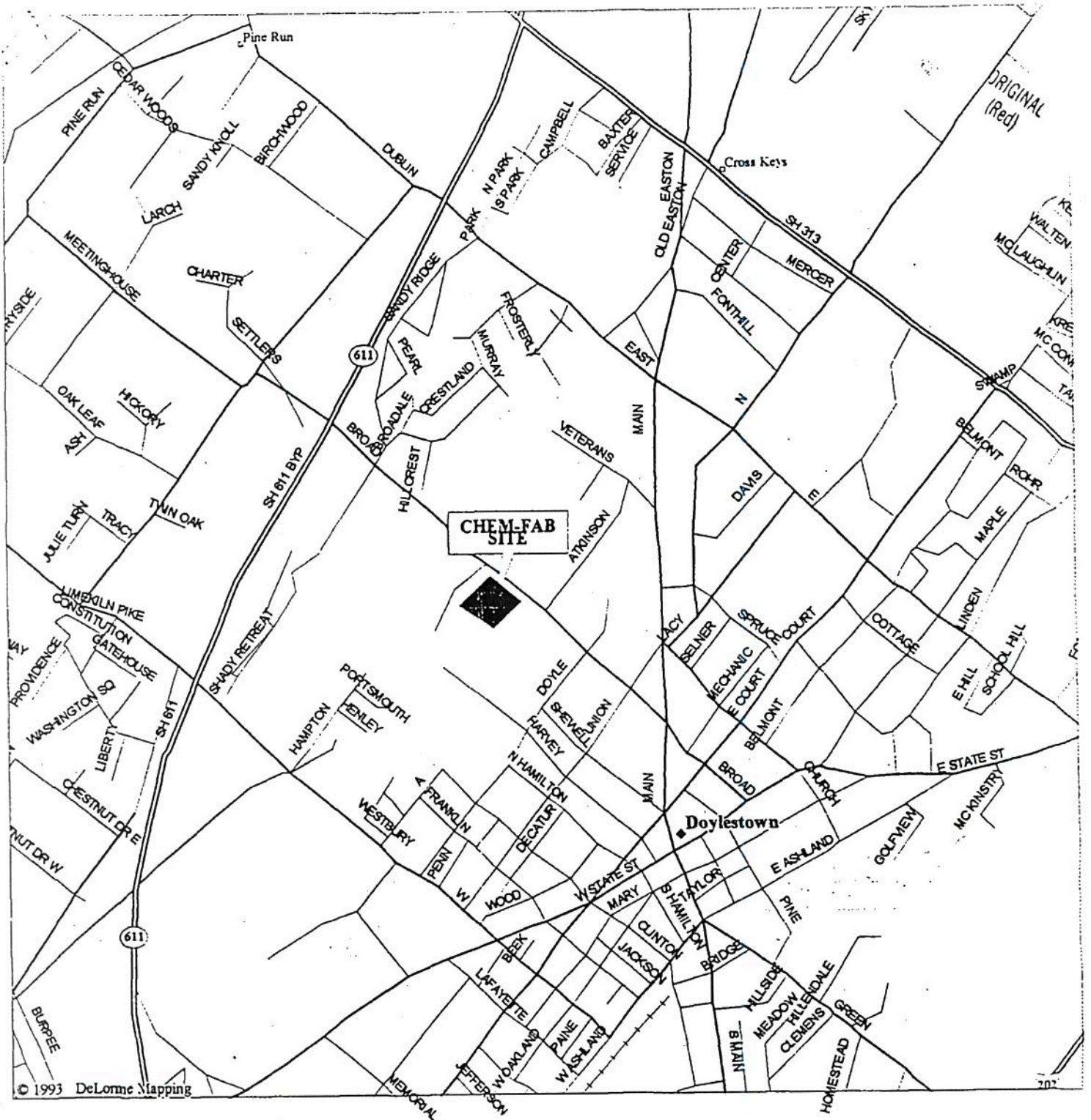
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APPENDICES

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A. Site Location Map and Site Sketch



© 1993 DeLorme Mapping

LEGEND

- State Route
- Town, Small City
- Population Center
- Street, Road
- Hwy Ramp
- Major Street/Road
- State Route
- US Highway
- Railroad

— River

Scale 1:15,625 (at center)

1000 Feet

500 Meters

CHEM-FAB SITE LOCATION

Mag 15.00

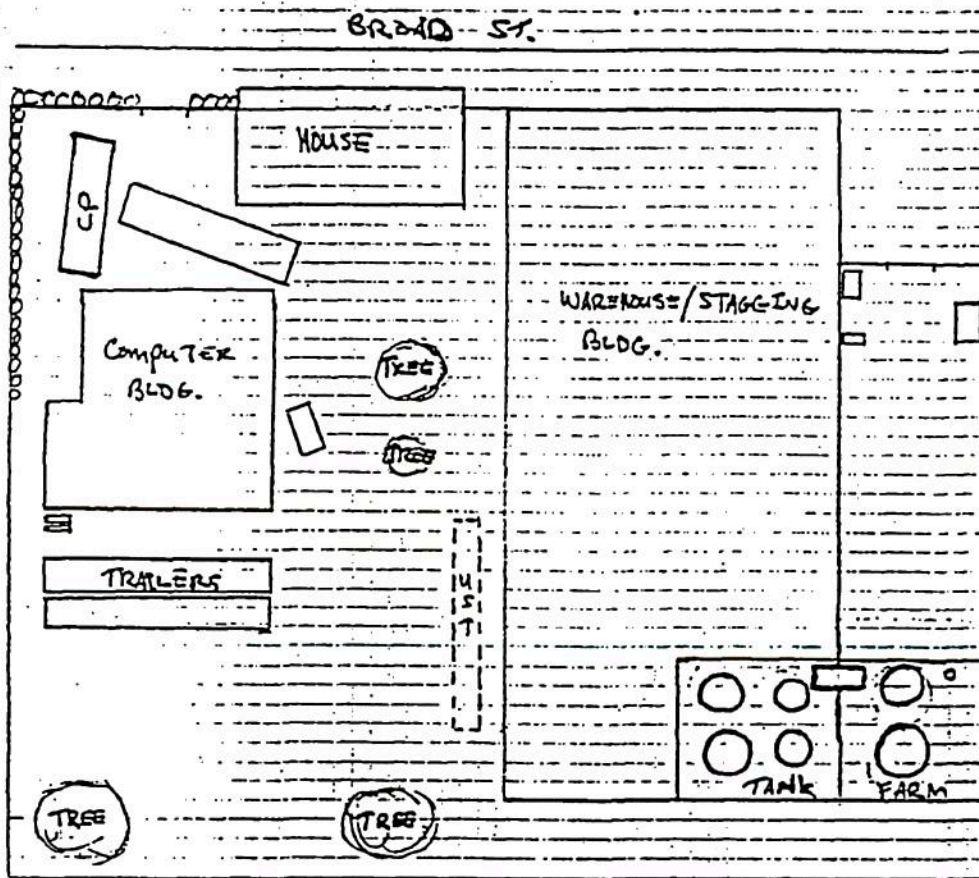
Tue May 14 08:56:52 1996

AR000093

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CHEM - FAB, INC.

SITE MAP



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B. Funding Documents



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

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MAR 23 1995

SUBJECT: Approval of a Request for Funds for a Removal Action
Chem Fab Corporation Drum Site
Doylestown, Bucks County, Pennsylvania

FROM: Thomas C. Voltaggio, Director
Hazardous Waste Management Division (3HW001)

TO: Elliott P. Laws, Assistant Administrator
Office of Solid Waste and Emergency Response (5101)

THRU: Stephen Luftig, Acting Director
Office of Emergency and Remedial Response (5201)

ATTN: John Riley, Acting Director
Emergency Response Division (5202)

ISSUE

The attached CERCLA Request for Funds for a Removal Action pertains to the Chem Fab Corporation Drum Site, a defunct business located in a commercial area in Doylestown, Bucks County, Pennsylvania. A removal assessment was conducted on September 13, 1994. During investigation EPA Region III, National Enforcement Investigations Center (NEIC), and others found the presence of improperly and incompatibly stored drums of hazardous substances. These substances included but were not limited to flammable liquids such as methyl isobutyl ketone and acids, including hydrochloric acid. Some drums bore labels, indicating that they were waste acids dating back to the mid 1980's. Some drums were staged inside a building while others were outside and fully exposed to the elements. Additionally, a 50-foot underground storage tank of questionable integrity, was uncovered and found to contain an unknown substance that appeared to be leaking.

Because conditions at the Chem Fab Corporation Drum Site, meet removal criteria set forth in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR, Section 300.415, and pursuant to Delegation of Authority 14-1-A, the Hazardous Waste Management Division Director has authority to approve CERCLA Removal actions with a total cost of less than \$2 million and completion within 12 months. US EPA Region III has approved the release of \$607,120 of which approximately \$580,800 are Extramural costs, to mitigate the threat to public health, welfare, and the environment.

Attachment: Request for Funds



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

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MAR 28 1995

SUBJECT: Request for Funds for a Removal Action
Chem Fab Corporation Drum Site
Doylestown, Bucks County, Pennsylvania

FROM: George English, On-Scene Coordinator *George W. English*
Eastern Response Section (3HW31)

TO: Thomas C. Voltaggio, Director
Hazardous Waste Management Division (3HW00)

THRU: Abraham Ferdas, Associate Division Director for
Superfund Programs (3HW02) *Abraham Ferdas*

I. PURPOSE

A removal assessment was performed at the Chem Fab Corporation Drum Site (Site) in Doylestown, Bucks County, Pennsylvania, on 09/13/94 in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300, by the On-Scene Coordinator (OSC). The OSC has determined that the Site poses an imminent and substantial threat to public health, welfare, and the environment, due to the presence of uncontrolled hazardous substances in drums and containers. The OSC has determined that the Site meets the criteria for initiating a Removal Action under Section 300.415 of the NCP. Funds are required to begin Removal Actions pursuant to Section 104 of CERCLA as amended by 42 USC § 9604. The actions necessary to abate the threats at this site are anticipated to require less than 12 months and \$2 million for completion.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

The Site is a fenced three-acre property with three buildings located in a commercial area on N. Broad Street in Doylestown, Bucks County, PA. Two creeks, Pine Run and Cook Run, are within an approximate two-mile radius of the site. Drums were found outside on the eastern side of the property, inside of the Chem Fab building, and inside the Electronic Marketing Group (EMG) building.

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EMG is a computer distributor and is still in business. The 50-foot underground storage tank was located on the western side of the Chem Fab building.

B. Site Background

Chem Fab Corporation, a Delaware Corporation, is the current owner of the Site. Chem Fab Corporation is believed owned by Manfred DeRewal, Sr., who was the owner/operator of Revere Chemical and Boarhead Farms, both of which are Superfund sites that ranked on the National Priorities List.

On September 2, 1994, OSC George English met with Bucks County officials to collect information on Chem Fab Corporation, Reports of illegal dumping at the facility date back to 1973. The most recent report, dated June 1994, indicated the presence of abandoned drums and containers. A recent assessment conducted by the Pennsylvania Department of Environmental Resources (PADER) indicated the presence of hexavalent chromium in the soil at the Site.

On September 13, 1994, US EPA's National Enforcement Investigations Center (NEIC), US EPA's Criminal Investigations Division (CID) and FBI officials executed a ten-day search warrant at Chem Fab Corporation, for evidence of illegal disposal of hazardous materials at the facility. OSC English conducted a removal assessment and provided technical support to the criminal investigation. Criminal investigation activities included drum and soil sampling and excavation to verify the presence of an underground storage tank.

C. Quantities and Types of Substances Present

Approximately 100 drums and 1 underground storage container were found during the Removal Assessment and Criminal Investigation. Many were tentatively identified as containing flammable liquids and acids. Acid drums bore hazardous waste labels indicating that the waste was generated in the mid 1980's. Drums of methyl isobutyl ketone and hydrochloric acid were located on the Chem-Fab portion of the Site. These materials are defined as hazardous substances pursuant to CERCLA Section 101(14) and are listed in 40 CFR, Part 302.4 as hazardous substances.

A partially filled underground storage tank was discovered on the Chem Fab Corporation portion of the Site. Initial information indicates the tank was used to store chromic acid, which is defined and listed as a hazardous substance. The tank is of questionable integrity and may be leaking.

It is suspected that hazardous substances stored on Site may be waste materials traditionally associated with wastes from other DeReWal-owned Superfund sites.

D. National Priorities

This site has not yet been reviewed for placement on the National Priorities List (NPL). The OSC will forward information obtained from the removal action to the site assessment section.

E. State and Local Authorities' Roles

PADER, Bucks County Emergency Services, and Doylestown Police and Fire Department have provided the OSC with background information concerning the Site. The OSC continues to coordinate Site activities with State and local officials.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

Section 300.415 of the NCP lists the factors to be considered in determining the appropriateness of a Removal Action. Paragraphs (b)(2) i, ii, iii, iv, v, vi, and vii of Section 300.415 directly apply as follows to the conditions at the Chem Fab Corporation, Site.

- A. 300.415 (b)(2)(i) "Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants."

The Chem Fab Corporation Drum Site is situated in a moderately-developed commercial/residential area on N. Broad Street in Doylestown, Bucks County, PA, where the threat of the possible release of hazardous substances into the environment may occur. The drums on the eastern side of the property are in continued exposure to the elements, which has accelerated their deterioration. Some of the hazardous substances found onsite consist of, but are not limited to, solvents (methyl isobutyl ketone), and acids (hydrochloric acid). Both methyl isobutyl ketone and hydrochloric acid are listed as CERCLA hazardous substances according to 40 CFR Part 302, Table 302.4. The potential exists for a catastrophic release or fire, resulting in the uncontrolled release of hazardous substances into the environment.

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- B. 300.415(b)(2)(ii) "Actual or potential contamination of drinking water supplies or sensitive ecosystems."

The section of Bucks County where Chem Fab Corporation is located has a shallow water table. Residents of Doylestown rely on groundwater for their potable water source. Local officials have identified several wells in close proximity to the facility. During the removal assessment, excavation activities revealed an underground storage tank containing an unknown substance. The bottom portion of this tank, which was reportedly used to store chromic acid, a hazardous substance, was surrounded by liquid. The probability that the contents of this tank are leaking is very high, which poses a potential threat to drinking water supplies.

Additionally, Pine Run and Cook Run are within approximately a two mile radius of the site. Contaminants which may migrate off-site via groundwater could have the potential to impact aquatic organisms.

- C. 300.415(b)(2)(iii) "Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.

Currently, drums and containers of CERCLA listed hazardous substances are incompatibly and haphazardly stored on-site. The threat of release of these substances is compounded by the fact that the Chem Fab Corporation portion of the Site is vacant. Accidental or intentional release of these substances may occur due to incompatible chemical storage, fire, and/or through acts of vandalism.

Continual exposure to the elements has caused accelerated deterioration of drums containing CERCLA hazardous substances. No specifically designed secondary containment systems are installed to help contain a potential release from these containers.

The drums found inside of the EMG building had labels which dated to the mid 1980's. Due to the age of the drums, the integrity of the containers and stability of the contents are questionable. Several of these drums have been hand-labeled as "waste acid." Old manufacturer labels on the drums may not represent the actual contents.

During the Removal Assessment, an underground storage tank containing an unknown substance was uncovered. Information received by EPA indicated that this tank was used as a receptacle for chromic acid. The condition of this tank is not known.

- D. 300.415(b)(2)(iv) "High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate."

During excavation activities, an underground storage tank containing an unknown substance was uncovered. Since the condition of this tank is not known, a potential for the contents inside the tank to escape and impact the surrounding soils exists. Additionally, PADER soil analyses indicated high concentrations of hexavalent chromium. Chromium is listed as a CERCLA hazardous substance according to 40 CFR part 302, Table 302.4.

- E. 300.415(b)(2)(v) "Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;"

Drums are stored outside the facility in an unprotected area on the eastern side of the property. As the drums may corrode due to constant weathering and leak their contents on the ground, the potential of a release of hazardous substances exists.

- F. 300.415(b)(2)(vi) "Threat of fire and explosion;"

Drums of incompatible materials were found stored together inside and outside of the buildings. In the event of a fire, the reaction caused by these incompatible substances (flammables and acids) may cause an emergency threat to human health and the environment.

- G. 300.415(b)(2)(vii) "Availability of other appropriate federal or state response mechanisms to respond to the release."

PADER and local officials have requested the assistance of the U.S. EPA to mitigate the threats posed by this site.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances, pollutants, and contaminants from this Site, if not addressed by implementation of the response actions listed in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, and to the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Action Description

The planned Removal Action consists of the following activities:

- Contain and characterize any hazardous substances that have leaked from containers.
- Stabilize leaking and/or open containers.
- Characterize contents of drums and other containers.
- Properly contain/package hazardous materials on site.
- Segregate containers based on hazard category of contents.
- Stage containers for disposal.
- Sample and remove any contaminated soil.
- Address groundwater contamination, if any.
- Properly dispose of hazardous materials.

The proposed Removal Action is expected to run less than the statutory 12-month time limit for Removal Action, barring any unforeseen circumstances or disposal restrictions.

B. Estimated Costs

<u>Extramural Costs</u>	<u>Proposed Ceiling</u>
Regional Allowance Costs	
ERCS	\$ 467,000
20% Contingency	<u>93,400</u>
Subtotal	\$560,400
Other Extramural Costs not Funded from Regional Allowance	
TAT	<u>\$ 17,000</u>
Subtotal	\$ 577,400
20% Contingency	<u>3,400</u>
Total Extramural	\$ 580,800

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Intramural Costs

EPA Direct Costs	\$ 8,400
EPA Indirect Costs	<u>17,920</u>
Total Intramural	\$ 26,320
TOTAL PROJECT CEILING	\$ 607,120

C. Contribution to Remedial Performance

The Chem Fab Corporation Site is a not on the NPL, so there are currently no plans for long-term Remedial Action. The proposed Removal Action is consistent with accepted removal practices and is expected to abate the threats that meet the NCP removal criteria. The proposed action is not anticipated to impede future responses at this Site.

D. Compliance with ARARS

The proposed Removal Action will comply with all applicable, relevant, and appropriate environmental and health requirements (ARARS), to the extent practicable considering the exigencies of the situation. OSC has requested ARARS from PADER and will forward when received.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD NO ACTION BE TAKEN OR ACTION DELAYED

If no action is taken or action is delayed, the threat of a continued release of CERCLA hazardous substances, pollutants and contaminants and potential fire and explosion hazard increase as drums and containers fully exposed to the elements continue to deteriorate. Additionally, the structural integrity of the bulk underground storage container is questionable, and may be directly responsible for PADER-documented hexavalent chromium contaminated soil, and potential groundwater contamination.

VII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues pertaining to the Chem Fab Corporation Drum Site.

VIII. ENFORCEMENT

The EPA Removal Enforcement Section has been provided with all background information available to pursue any, and all enforcement actions pertaining to the Chem Fab Corporation Drum Site (see attached Confidential Enforcement Memorandum).

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IX. RECOMMENDATION

Because conditions at the Chem Fab Corporation Drum Site meet the criteria as set forth in Section 300.415 of the NCP for a Removal Action, I recommend your approval to authorize \$607,120 to abate the imminent threats to the public health and the environment, of which \$580,800 is for Extramural Costs. You may indicate your approval or disapproval by signing below.

APPROVED: _____



DATE: _____

3/24/98

DISAPPROVED: _____

DATE: _____

Attachments: Confidential Enforcement Memorandum

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C. Newspaper Articles

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Chemicals and gear analyzed for drugs

Acting on a tip, a team of federal investigators raided the site of the former Chem-Fab Corp. in Doylestown Borough.

By Doug Donovan
and Andrew Metz
INQUIRER CORRESPONDENT

DOYLESTOWN BOROUGH — Federal officials are continuing to investigate unknown chemicals and equipment they discovered in a Sept. 14 raid of the former Chem-Fab Corp. in Doylestown Borough.

Officials from the FBI and the federal Environmental Protection Agency said last week that they had not determined whether the chemicals stored in a 50-foot-long underground tank and in 100 55-gallon drums are illegal.

Drug Enforcement Administration agents were called in by the EPA and FBI after glass beakers that agents believed may have been used to manufacture methamphetamine were discovered in a trailer behind a garage on the property.

During the three-day search of the site, DEA chemists said they found no traces of illegal drugs on the glassware. However, DEA officials said, they are continuing to analyze the equipment.

Investigators removed the glassware and samples from the barrels and storage tank and are testing them in federal laboratories in New York.

Acting on an anonymous tip, the team of federal investigators con-

verged on the five-acre property at 300 N. Broad St., the former site of Chem-Fab Corp., a computer hardware company incorporated in Pennsylvania in 1967.

Chem-Fab Corp. is listed as the parent company for Electronic Marketing Group, a mail-order computer supplies firm.

EMG operated out of the garage behind Chem-Fab's old building and went out of business last year.

Elaine Siegel, an investigator with the county Department of Consumer Protection, said the FBI is now investigating EMG's owners, Mark Mesiti and Manfred DeRewal Jr. She said the department had received 69 complaints from angry customers who said the firm sent them faulty equipment, or no equipment at all, after receiving payment.

EMG's financial backer, CoreStates Bank N.A. in Philadelphia, has responded to nearly half of those complaints, crediting customers' accounts with about \$57,000, according to Siegel. The remaining complaints could cost as much as \$65,000, she said.

The FBI would not comment on the case.

DeRewal, who lives in Bedminster Township, said in an interview that he was cooperating as much as he could with the Department of Consumer Protection. He also said he operated a rare-metals company from 1979 until EMG started in 1993.

DeRewal said the glassware DEA agents found was his, but said it wasn't used for the production of methamphetamine. He said he used it to store liquids extracted from rare metals.

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**Federal On-Scene Coordinator's Report
Page A23**

D. Photo Documentation

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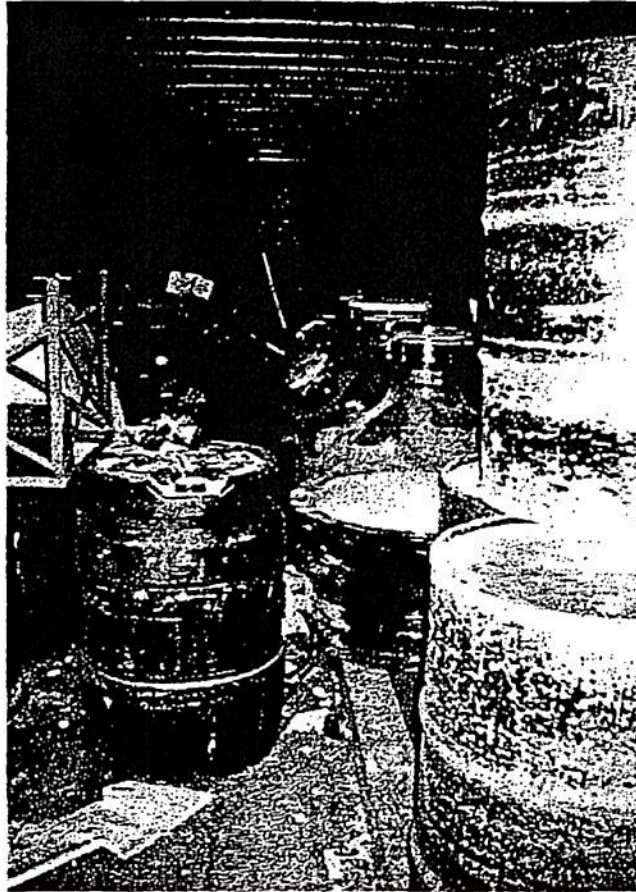


Photo 1 - Drums and glassware found in trailers on-site.



Photo 2 - Haphazard drum storage, as discovered, in rear of computer building



Photo 3 - Chem-Fab drum storage outside warehouse.



Photo 4 - Chem-Fab storage of drums and small containers inside warehouse.

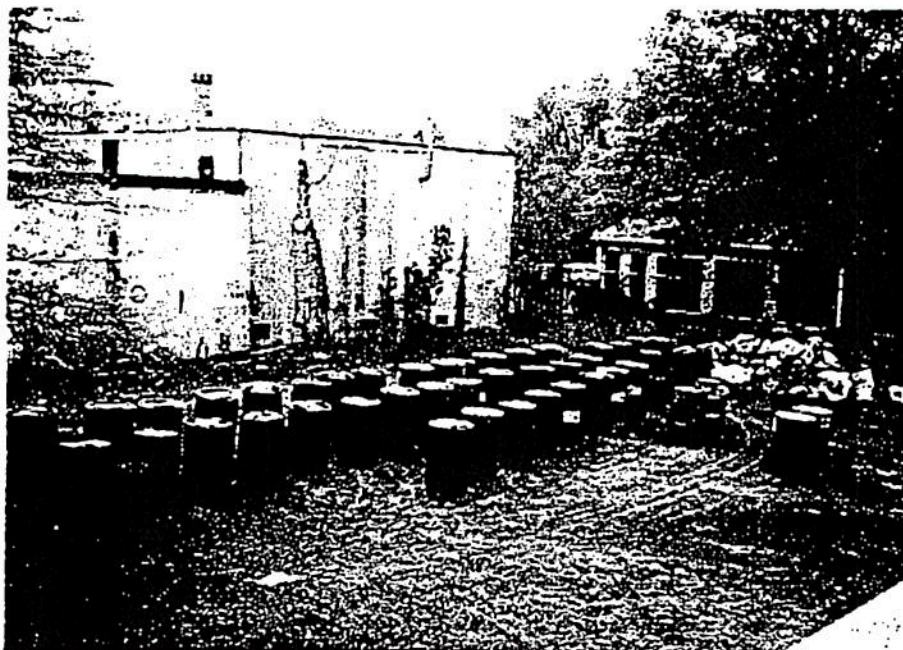


Photo 5 - ERCs drum staging area in yard between warehouse and computer building. Location of underground storage tank is alongside building, and marked with spray paint on wall.



Photo 6 - Close-up of buried underground storage tank.

Photograph Log
Chem-Fab
Doylestown, Bucks Co., PA

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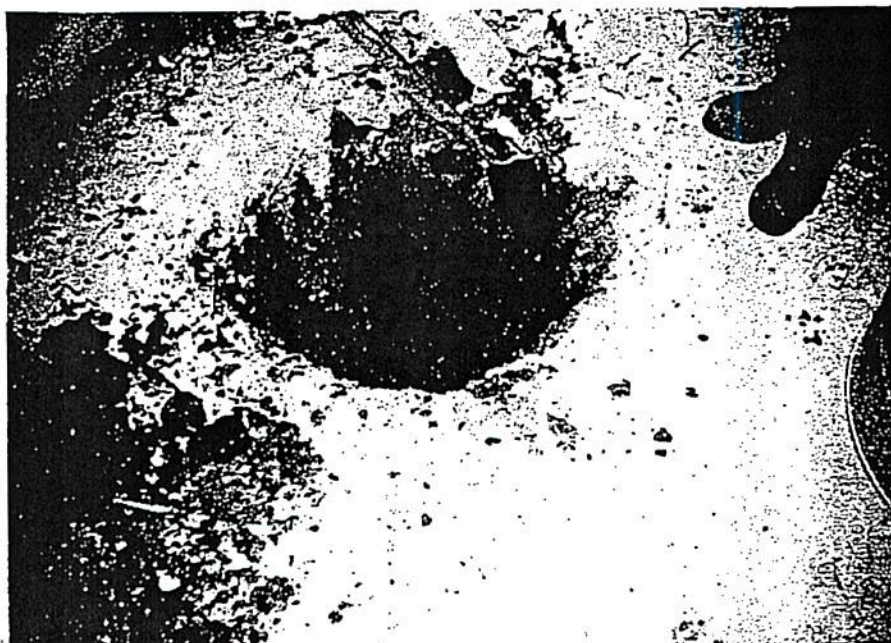


Photo 7 - Suspect drain ports in warehouse. Note stained soil.

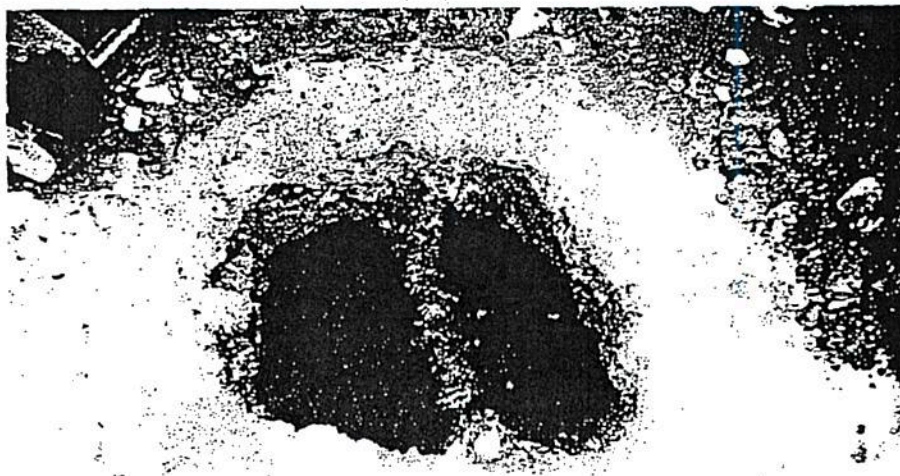


Photo 8 - Suspect drain port in warehouse. Note oil stained water.

Photograph Log
Chem-Fab
Doylestown, Bucks Co., PA

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Photo 9 - Suspect sump in warehouse. Note stained water and dead bird.

SPECIAL BULLETIN A

**Chem-Fab NPL Site
Doylestown, Pennsylvania – Bucks County**

November 8, 2012

ATTN: Ronald J. Borsellino, Director
Hazardous Site Clean-up Division (3HS00)

THRU: Dennis P. Carney, Associate Director
Preparedness and Response Office (3HS30)

THRU: Gerald T. Heston, Chief
Eastern Response Branch (3HS31)

FROM: Eduardo Rovira, Jr., OSC
Eastern Response Branch (3HS31) *R 11/8/12*

I. Issue

Groundwater underlying the Chem-Fab facility and adjacent properties is contaminated with Trichloroethylene (TCE). TCE is a colorless liquid which is used as a solvent for cleaning metal parts. Drinking or breathing high levels of trichloroethylene may cause nervous system effects, liver and lung damage, abnormal heartbeat, coma, and possibly death.

Sub-slab data from sampling events (October 2011 and January 2012) showed the presence of VOCs (mainly TCE) at high concentrations underneath two commercial office buildings (Building A and C, as described herein) at the Site. Indoor air data (October 2011, January and August 2012) showed concentrations of VOC at levels of concern in one of the buildings (Building A).

The release meets the criteria for conducting a removal action under Section 300.415 of the NCP. The OSC has determined that immediate funds are needed to mitigate the threat posed to human health and the environment. The OSC has authorized a ceiling for the removal action of \$50,000, in accordance with EPA Delegation 14-2.

This Special Bulletin documents the scope of work needed to complete the removal action to protect public health and the environment.

II. Background

A. Site Description

The Chem-Fab Site is located at and around 300-360 North Broad Street in

Doylestown, Montgomery County, Pennsylvania. The Site includes 300-360 North Broad Street (the "Property") upon which industrial and disposal operations occurred in the past as well as other properties on which and to which contamination from such operations has migrated or otherwise come to be located. The Property currently contains a small office park hosting several commercial tenants in 3 separate buildings:

Building A: 300 – 330 North Broad Street (7 business tenants)
Building B: 340 North Broad Street (1 business tenant)
Building C: 350 – 360 North Broad Street (3 business tenants)

B. Site Background

From the mid-1960s to the early 1990s, Chem-Fab, Inc. (Chem-Fab) operated an electroplating and metal etching facility on the Property. Chem-Fab's operations generated wastes that included metals; volatile organic compounds (VOC) such as 1,1,1-trichloroethane ("1,1,1-TCA"), methylene chloride, and trichloroethylene ("TCE"); ferric chloride; mineral spirits; chromic acid rinse water and sludge; chromic acid; sulfuric acid; sodium bisulfate; and sodium hydroxide.

In the late 1970s, Chem-Fab was acquired by Boarhead Corporation, a business established by Manfred DeRewal, Sr. DeRewal also owned DeRewal Chemical Company Inc. (DCC), which removed, transported, and disposed of chemical waste generated by other companies. During the 1970s, liquid wastes, including hundreds of thousands of gallons of ammonia, hydrochloric acid, and pickle liquor waste, were transported from various industrial entities to the Property for disposal. In addition to Chem-Fab, two other entities associated with DeRewal – a gallium reclamation business and a computer assembly outfit – operated at the Property during the 1980s and 1990s, respectively. Chem-Fab owned the property through approximately May 1999.

In August 1987, EPA performed a Preliminary Assessment and Site Inspection (PA/SI) at the Doylestown Groundwater Site and the Chem-Fab Site. During the PA/SI, water samples from residential wells and the municipal well located in the vicinity of the Chem-Fab Site were found to contain elevated levels of VOC including TCE and tetrachloroethylene (PCE). In October 1987, EPA conducted a removal action which included the delivery of bottled water and carbon filtration units to affected residences and connection of affected residences to public water supplies.

In September 1994, EPA conducted a removal assessment at the Property. EPA found improperly and incompatibly stored drums of hazardous material, including flammable liquids and acids. Samples from these drums indicated the presence of acids, TCE, and chromium. A drum of radioactive thorium nitrate and containers of ammonia were also discovered. EPA also found a 50-foot underground storage tank (UST) which contained approximately 6,000 gallons of liquid and sludge and appeared to be leaking. Samples from the UST were found to contain hexavalent

chromium. Samples taken from a sump located inside the warehouse indicated the presence of TCE.

In 1994-1995, EPA conducted a second removal action at the Chem-Fab Site. During that response, EPA removed 117 drums and 8,400 gallons of liquid wastes, including chromium-contaminated wastes from the UST as well as other solid wastes and fuel oils.

In 1998, PADEP assumed the lead role in further assessing the Chem-Fab Site. Beginning in 1999, PADEP began an investigation of the soils and groundwater in the vicinity of the Site. PADEP found hexavalent chromium (Cr[VI]) and VOCs in the soils and in the groundwater on the Property and on an adjacent property. Visible chromium contamination was observed in the drainage ditch on the adjacent property. In 2004, PADEP issued a Statement of Decision selecting a groundwater remedy for the Site. However implementation of the remedy was delayed due to technical issues and lack of funding. PADEP continued its investigation and requested that EPA list the Site on the CERCLA National Priorities List (NPL).

EPA proposed the Chem- Fab Site for the NPL in September 2007. The Site was formally added to the NPL in March 2008. In September 2009, EPA initiated a fund-lead Remedial Investigation and Feasibility Study to comprehensively characterize the nature and extent of contamination at the Chem-Fab Site and to evaluate alternatives for addressing threats to human health and the environment presented by such contamination. EPA also conducted vapor intrusion (VI) sampling in the homes of residents living down-gradient from the Site, and conducted VI sampling in the commercial spaces at the Property.

C. Types of Substances Present

Sub-slab data showed the presence of VOC (mainly TCE) at high concentrations under Building A and Building C. Indoor air data showed concentrations of VOC at levels of concern at Building A, including the results of the August 2012 sampling event, which was conducted after the property owner turned on a vapor mitigation system. The data was provided to an EPA toxicologist for review. The EPA toxicologist calculated carcinogenic risks (CR) and non-carcinogenic hazard quotients (HQ) for each individual commercial space at the Property where sampling occurred. For several spaces within Building A the indoor air data showed an HQ at or exceeding 3 and/or a CR exceeding 1×10^{-04} based on at least one of the two data points. HQ and CR calculations for the sub-slab data points show similar risks for exposure to vapors detected below the building, which vapors could enter the building in the future.

On July 18, 2012, the Property owner turned on an existing vapor mitigation system. Three weeks after the system was turned on (August 8, 2012) EPA took

indoor air samples and found that VOC levels had not been significantly reduced in Building A, leased spaces 320, 324, 328 and 330.

Trichloroethylene (TCE) is a nonflammable, colorless liquid with a somewhat sweet odor and a sweet burning taste. It is used mainly as a solvent to remove grease from metal parts, but it is also an ingredient in adhesives, paint removers, typewriter correction fluids, and spot removers.

TCE is not thought to occur naturally in the environment. However, it has been found in underground water sources and many surface waters as a result of the manufacture, use, and disposal of the chemical.

When TCE enters the environment:

1. It dissolves a little in water, but it can remain in ground water for a long time.
2. It quickly evaporates from surface water, so it is commonly found as a vapor in the air.
3. It evaporates less easily from the soil than from surface water. It may stick to particles and remain for a long time.
4. It may stick to particles in water, which will cause it to eventually settle to the bottom sediment.
5. It does not build up significantly in plants and animals.

D. National Priorities List

EPA proposed the Chem-Fab Site for the NPL in September 2007. The Site was formally added to the NPL in March 2008.

E. State and Local Authorities Roles

The Commonwealth of Pennsylvania referred the Site to EPA because it had exhausted all of its funding resources to remediate the Site and the TCE ground water plume.

EPA continues to coordinate efforts with PADEP, and other Federal, State and local authorities regarding developments at the Site.

III. Threats to Public Health or Welfare or the Environment

Section 300.415 (b) (2) of the NCP, 40 C.F.R. § 300.415 (b) (2), identifies factors to be considered in determining the appropriateness of a removal action. Paragraphs (i),(iv) and (vii) of that section directly apply as follows to the conditions at the Chem-Fab Site:

- *300.415(b)(2)(i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.*

VOCs, including TCE, have been released into groundwater at and near the Property. These VOCs have migrated from groundwater into indoor air at the Property. Sampling results showed concentrations of VOC (mainly TCE) in indoor air at levels of concern in Building A.

Breathing high levels of trichloroethylene may cause nervous system effects, liver and lung damage, abnormal heartbeat, coma, and possibly death.

- *300.415(b)(2)(iv) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.*

VOCs, including TCE, have been released into groundwater at and near the Property. VOC vapor has migrated from groundwater into spaces beneath the foundation of buildings at the Property. Sampling results showed concentrations of VOC vapor at high concentrations underneath Buildings A and C. VOCs are migrating from beneath Building A into the air inside the building. VOCs are not presently migrating from beneath Building C into the air inside the building.

- *300.415(b)(2)(vii) The availability of other appropriate federal or state response mechanisms to respond to the release.*

PADEP has requested EPA assistance to provide technical expertise and financial resources in assessing and responding to the situation.

IV. Proposed Actions and Estimated Costs

A. Actions

1. Install and operate air purifiers (with carbon filters) in Building A, leased spaces 320, 324, 328 and 330.
2. Obtain additional air samples (indoor and sub-slab) from Building A in January 2013.
3. Continue to evaluate the existing mitigation system and the need for and scope of additional actions, as necessary, to minimize or prevent further migration of VOCs into the tenant spaces at the property.

B. Estimated Costs

	Ceiling
ERRS	\$25,000
START	\$15,000
<u>Unallocated</u>	<u>\$10,000</u>
TOTAL	\$50,000

C. Contribution to Remedial Performance

The proposed actions stated in Section IV above are appropriate and consistent with the anticipated Remedial Actions that may be taken at the Site.

D. Compliance with ARARS

The removal action will comply with all Applicable or Relevant and Appropriate Requirements (ARARs), to the extent practicable, considering the exigencies of the situation.

V. Expected Change in the Situation should No Action be Taken or Action Delayed

If no action is taken, or delayed, tenants of Building A will continue to be exposed to TCE at levels of concern.

VI. Outstanding Policy Issues

No outstanding policy issues.

VII. Enforcement

The OSC will coordinate with the Office of Enforcement regarding the possibility of enforcement-lead activities at the Site.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SEP 19 2013

SUBJECT: Request for Additional Funds for a Removal Action, Approval for a \$2 Million Exemption Request and Scope Change at the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania.

FROM: *Eduardo Rovira, Jr.*
Eduardo Rovira, Jr., On-Scene Coordinator
Eastern Response Branch (3HS31)

TO: David P. Wright, Acting Director
Office of Preparedness and Response (3HS30)

I. PURPOSE

The purpose of this "Request for Additional Funds for a Removal Action, Approval for a \$2 Million Exemption Request and Scope Change ("Action Memo") is to document the need for funding and approval to conduct and continue Removal Action to prevent or mitigate the threat posed by the release or substantial threat of release of hazardous substances, pollutants or contaminants at the Chem-Fab Site (the "Site") located in Doylestown Borough, Bucks County, Pennsylvania.

This action is proposed to address the threat to public health from certain contaminated soils on property within the Site and which is located at 300 – 360 North Broad Street ("Property"). Hazardous substances in soils at the Property have been determined to be responsible for contaminant vapor intrusion ("VI") into a commercial building on the Property and groundwater contamination that has impacted a public supply well down gradient from the Property. The purpose of the Removal Action is to reduce the mass of contaminants in the source area to limit the potential for VI into additional nearby commercial structures, and limit migration of contaminants to groundwater (thereby limiting the impact on the public supply wells). To accomplish these goals, this Action Memo proposes to excavate and transport certain soils on the Property outside the footprint of the buildings at the Property for disposal at an off-site disposal location.

The Site is on the NPL and is currently the subject of an ongoing Remedial Investigation by the Remedial Program. In January 2012, the On-Scene Coordinator ("OSC") commenced a Removal Site evaluation pursuant to Section 300.410 of the National Contingency Plan ("NCP") which specifically focused on vapor intrusion into the commercial buildings on the Property. The data revealed the presence of VOCs (mainly TCE) at high concentrations in soils underneath two of the three commercial buildings at the Property, as well as high concentrations of VOCs at levels of concern in suites in one of the buildings.

On November 8, 2012, using authority provided under EPA Delegation 14-2, the OSC authorized the expenditure of CERCLA funding in an amount not to exceed \$50,000 to initiate a Removal Action intended to reduce VOCs levels in the suites inside the impacted building. To accomplish this, the OSC installed portable air purifiers into selected suites within the impacted building. The OSC subsequently collected additional data to evaluate the efficacy of such units combined with the existing building vapor mitigation system in reducing VOCs levels within the building.

In January 2012 the Remedial Program completed a Focused Feasibility Study intended to evaluate alternatives to address threats presented by soils located at the Property. In December 2012, the Remedial Program issued a Record of Decision selecting remedial action consisting of, among other things, the removal and off-site disposal of certain contaminated soils on the Property outside the footprint of the three commercial buildings on the Property. EPA Remedial funding to commence this action has not been secured and may not be secured in the near term.

Based on the data collected (see Section III), potential future conditions at the Site, the extent of contamination and other reasons (e.g., lack of Remedial and State funding to do the work), the OSC determines that continued Removal Action is necessary to mitigate or prevent a threat to public health and that a change of scope, additional funding, and an exemption to the 12-month limit are required to perform such action.

The proposed Removal Action consists of excavation and off-site disposal of certain soils outside of the footprint of the buildings at the property. As discussed below, the proposed Removal Action meets the criteria for the "consistency" exemption to the \$2 million statutory limit for Removal Actions pursuant to Section 104(c)(1)(c) of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 9604(c)(1)(C).

Additional CERCLA funding in the amount of \$2,688,000 is requested above the \$50,000 already authorized by the OSC pursuant to Delegation of Authority 14-2. This funding will establish an estimated Removal Project Ceiling of \$2,738,000, of which \$2,100,000 is from the Regional Allowance. The funding is necessary to mitigate the threats identified in this Action Memo.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Physical Location/Site Characteristics

The Chem-Fab Site is located at and around 300 – 360 North Broad Street in Doylestown, Montgomery County, Pennsylvania. The Site is located approximately 0.6 miles from the center of Doylestown and is surrounded by a mixture of commercial, industrial and residential areas. The closest school is

approximately 0.5 miles to the southwest. The Site includes 300 – 360 North Broad Street (the “Property”), upon which industrial and disposal operations occurred in the past, as well as other properties on which and to which contamination from such operations has migrated or otherwise come to be located. The Property currently contains a small office park hosting several commercial tenants in 3 separate buildings identified on Attachment A as follows:

Building A: 300 – 330 North Broad Street
Building B: 340 North Broad Street
Building C: 350 – 360 North Broad Street

The areal extent of the Chem-Fab Site will be further delineated in the ongoing Remedial Investigation.

2. Site Background

From the mid-1960s to the early 1990s, Chem-Fab, Inc. (“Chem-Fab”) operated an electroplating and metal etching facility on the Property. Chem-Fab’s operations generated wastes that included metals, volatile organic compounds (VOCs) such as 1,1,1-trichloroethane (“1,1,1-TCA”), methylene chloride, trichloroethylene (“TCE”), ferric chloride, mineral spirits, chromic acid rinse water and sludge, chromic acid, sulfuric acid, sodium bisulfate, and sodium hydroxide.

In the late 1970s, Chem-Fab was acquired by Boarhead Corporation, a business established by Manfred DeRewal, Sr. DeRewal also owned DeRewal Chemical Company Inc. (“DCC”), which removed, transported, and disposed of chemical waste generated by other companies. During the 1970s, liquid wastes, including hundreds of thousands of gallons of ammonia, hydrochloric acid, and pickle liquor waste, were reportedly transported from various industrial entities to the Property for disposal. In addition to Chem-Fab, two other entities associated with DeRewal (a gallium reclamation business and a computer assembly outfit) operated at the Property during the 1980s and 1990s, respectively. Chem-Fab owned the property through approximately May 1999.

In August 1987, EPA performed a Preliminary Assessment and Site Inspection (PA/SI) at the Doylestown Groundwater Site and the Chem-Fab Site. During the PA/SI, water samples from residential wells and the municipal well located in the vicinity of the Chem-Fab Site were found to contain elevated levels of VOCs including TCE and tetrachloroethylene (“PCE”). In October 1987, EPA conducted a Removal Action which included the delivery of bottled water and carbon filtration units to affected residences and connection of affected residences to public water supplies.

In September 1994, EPA conducted a Removal Assessment at the Property. EPA found improperly and incompatibly stored drums of hazardous material, including flammable liquids and acids. Samples from these drums indicated the presence of acids, TCE, and chromium. A drum of radioactive thorium nitrate and containers of ammonia were also discovered. EPA also found a 50-foot underground storage tank (UST) which contained approximately 6,000 gallons of liquid and sludge, which appeared to be leaking. Samples from the UST were found to contain hexavalent chromium. Samples taken from a sump located inside the warehouse indicated the presence of TCE.

In 1994 – 1995, EPA conducted a second Removal Action at the Chem-Fab Site. During that response, EPA removed 117 drums and 8,400 gallons of liquid wastes, including chromium-contaminated wastes from the UST as well as other solid wastes and fuel oils.

In 1998, PADEP assumed the lead role in further assessing the Chem-Fab Site. Beginning in 1999, PADEP began an investigation of the soils and groundwater in the vicinity of the Site. PADEP found hexavalent chromium (Cr[VI]) and VOCs in the soils and in the groundwater on the Property and on an adjacent property. Visible chromium contamination was observed in the drainage ditch on the adjacent property. In 2004, PADEP issued a Statement of Decision selecting a groundwater remedy for the Site. However implementation of the remedy was delayed due to technical issues and lack of funding. PADEP continued its investigation and requested that EPA list the Site on the NPL.

In September 2009, EPA commenced a Remedial Investigation at the Site, which is still ongoing. Concurrently with that study, EPA conducted VI sampling in the homes of residents living down gradient from the Site and conducted VI sampling in the commercial spaces at the Property in October 2011, January 2012, August 2012 and January 2013.

In January 2012, the Remedial Program completed a Focused Feasibility Study intended to identify alternatives to address threats to human health presented by certain contaminated soils at the Property. In December 2012, the Remedial Program issued a Record of Decision selecting remedial action consisting of, among other things, excavation and off-site disposal of certain soils at the Property outside the footprint of the buildings at the Property.

3. Quantities and Types of Substances Present

Contaminants in the soil and groundwater at the Site appear to be related to historical operations and disposal that occurred at the Property. Soil at the Property has been found to be contaminated with a number of inorganics, VOCs and semi-volatile organic compounds (“SVOCs”). The contaminants with the most significant levels include hexavalent chromium (“Cr[VI]”), PCE, and TCE.

Cr[VI], PCE, and TCE were found at concentrations up to 781 mg/kg, 190 mg/kg, and 4,000 mg/kg, respectively. The area of highest soil contamination roughly corresponds to the area where an above-ground tank farm was previously located. The former Chem-Fab facility had up to six above-ground storage tanks as well as a 10,000 gallon underground storage tank. Drums of waste were also found in this area during the 1994 EPA removal action. EPA found label information on drums and other containers indicating the presence of xylene, toluene, hydrochloric acid, sulfuric acid, nitric acid, caustic soda, methyl isobutyl ketone, polymeric isocyanate, benzenesulfonic acid, nickel rinse waste, methylene chloride, ferric chloride, chromate waste acid, and anhydrous ammonia.

Groundwater at the Site contains many of the constituents found in soil at the Property including, Cr[VI], PCE, TCE, and chemicals associated with the degradation of PCE and TCE, among other contaminants. The presence of the same contamination in the groundwater as the soil suggests that the two are linked and that the groundwater contamination is likely a result of infiltration of soil contamination into the water table below. The groundwater contamination extends from the Property in a southwest direction beneath the adjacent self-storage facility and into neighboring properties in Doylestown Township. The groundwater contamination also flows slightly westward in the direction of Cooks Run, a tributary of the Neshaminy Creek. Site-related contamination has appeared in Doylestown Municipal Water Authority Well ("MWAW") #13, located less than a quarter mile southwest of the Property and in Doylestown MWAW #8 which is located approximately a half mile to the southwest of the Property. Doylestown MWAW #13 was shut down in 2001 to help prevent further spread of the contamination. Doylestown MWAW #8 has shown levels of contamination and continues to be monitored.

VOCs, including PCE, TCE and their breakdown products have been detected in sub-slab samples taken below two of the three commercial buildings at the Property and in indoor air samples taken in one of the buildings. In vapor intrusion samples collected in October 2011, TCE was detected as high as 12,600 ppbv in the sub-slab and 41.2 ppbv in the indoor air.

Sub-slab data showed high concentrations of VOCs (mainly TCE) under Building A and Building C. Indoor air data showed concentrations of VOCs at levels of concern in Building A, including the results of the August 2012 sampling event, which was conducted after the property owner turned on an existing vapor mitigation system. An EPA toxicologist reviewed the data and calculated carcinogenic risks (CR) and non-carcinogenic hazard quotients (HQ) for each individual commercial space at the Property where sampling occurred. For several spaces within Building A, the indoor air data showed an HQ at or exceeding 3 and/or a CR exceeding 1×10^{-4} based on at least one of the two data points. HQ and CR calculations for the sub-slab data points show similar risks for

exposure to vapors detected below the building, which vapors could enter the building in the future.

TCE is a nonflammable, colorless liquid with a somewhat sweet odor and a sweet burning taste. It is used mainly as a solvent to remove grease from metal parts, but it is also an ingredient in adhesives, paint removers, typewriter correction fluids, and spot removers. TCE is not thought to occur naturally in the environment. However, it has been found in underground water sources and many surface waters as a result of the manufacture, use, and disposal of the chemical.

When TCE enters the environment:

1. It dissolves a little in water, but it can remain in ground water for a long time.
2. It quickly evaporates from surface water, so it is commonly found as a vapor in the air.
3. It evaporates less easily from the soil than from surface water. It may stick to particles and remain for a long time.
4. It may stick to particles in water, which will cause it to eventually settle to the bottom sediment.
5. It does not build up significantly in plants and animals.

3. National Priorities List

EPA proposed the Chem-Fab Site for the NPL in September 2007. The Site was formally added to the NPL in March 2008.

In September 2009, EPA initiated a fund-lead Remedial Investigation and Feasibility Study to comprehensively characterize the nature and extent of contamination at the Chem-Fab Site and to evaluate alternatives for addressing threats to human health and the environment presented by such contamination. In January 2012, EPA completed a Focused Feasibility Study intended to identify alternatives for addressing threats presented by contamination outside the footprint of the buildings at the Property. In December 2012, EPA selected remedial action that included, among other things, excavation and off-site disposal of much of this soil.

4. State and Local Authorities' Roles

EPA continues to coordinate efforts with PADEP, and other federal, state and local authorities regarding developments at the Site. State resources are not currently available to fund the response action.

B. Actions to Date

1. Previous Actions

In addition to the actions mentioned in Section II.A.2 above, the Removal Program conducted the following actions:

- a. October 2011 and January 2012: sub-slab and indoor air sampling in all three buildings on the Property. Results showed unacceptable levels of VOCs in the indoor air of Building A and high levels of VOCs under Buildings A and C.
- b. Requested the property owner to turn on an existing vapor mitigation system along the back of Building A. The system was turned on in July 2012.
- c. August 2012: indoor air sampling in Building A. Results showed unacceptable levels of VOCs in the indoor air of half of Building A (320 North Broad Street side), even after the Property owner turned on the existing vapor mitigation system. Installed portable air units in the 320 North Broad Street side of Building A.
- d. January 2013: sub-slab and indoor air sampling in Building A. Results showed acceptable levels of VOCs in the indoor air of Building A and still high levels of VOCs under Building A.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Section 300.415 of the NCP lists the factors to be considered in determining the appropriateness of a Removal Action. At this time, the following sections apply:

§ 300.415 (b)(2)(i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.

Results from the October 2011, January 2012 and August 2012 showed unacceptable VOCs levels in the indoor air of Building A and high levels of VOCs in the sub-slab of two out of the three buildings on the Property.

While the combined effect of the existing vapor mitigation system and the air purifiers currently reduces the VOCs levels vapors to acceptable levels within Building A on the Property, the air purifiers are a temporary measure and the mitigation system alone, as currently configured, is incapable of such reduction. In addition, changes in soil gas migration pathways, normal deterioration of the building(s) over time, changes in interior layout, and the reduced efficacy of the temporary units may collectively, over time, lead to unacceptable exposures to VOCs within the commercial building on the Property.

§ 300.415 (b)(2)(ii) Actual or potential contamination of drinking water supplies or sensitive ecosystems.

The drinking water supply for Doylestown has been contaminated by chemicals leaching from the soil (from the Site) to groundwater. Fluctuations in the water table have allowed contamination in the subsurface soils to migrate to groundwater. The removal of portions of the asphalt cover (parking area) by the Property owner has the potential to allow greater infiltration into the soil and thus increase the mobilization of contaminants and migration of contamination into the groundwater.

§ 300.415(b)(2)(iii) Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.

Historical information about the Site indicates that a 1,000 gallon underground catch basin may still exist at the rear of the Property. This area contains the highest levels of soil contamination at the Site. The Property owner has indicated that this catch basin has been compromised and may pose a threat of release. Fluctuations in the water table have allowed subsurface soil contamination to migrate to groundwater. The removal of portions of the asphalt surface will allow greater infiltration of precipitation and has the potential to release additional contamination from this catch basin to the groundwater.

§ 300.415(b)(2)(iv) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.

High levels of contamination have been found at the Property as shallow as 1 – 2 feet below ground surface. The removal of portions of the asphalt surface has increased the potential for these contaminants to migrate downward into the groundwater as a result of precipitation and laterally as a result of wind or other weather events.

VOCs, including TCE, have been released into groundwater at and near the Property. VOC vapor has migrated from groundwater into spaces beneath the foundation of buildings at the Property. Sampling results showed concentrations of VOCs vapor at high concentrations underneath Buildings A and C. VOCs are migrating from beneath Building A into the air inside the building. VOCs are not presently migrating from beneath Building C into the air inside the building.

§ 300.415(b)(2)(v) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

Heavy rainfall and/or wind may mobilize soil contamination in the areas where the asphalt surface has been removed and increase the potential that workers and the public are exposed to contaminants via direct contact. In addition, heavy rainfall would also raise the water table and facilitate migration that way.

§ 300.415 (b)(2)(vii) The availability of other appropriate federal or state response mechanisms to respond to the release.

PADEP does not currently have the resources to undertake response actions at the Site and has requested that EPA take the lead on mitigating the threats present onsite. Although the Site is on the NPL and a Remedial Action that would abate the threats identified herein has been selected by EPA, the Remedial Program is not in a position to implement the Remedial Action in a timely manner. There are no other federal or state response mechanisms currently available to expeditiously perform the actions necessary to mitigate the threats to public health and the environment presented by the release or threatened release of hazardous substances at the Site as described herein.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances and/or pollutants or contaminants from this Site, if not addressed by implementing the Removal Action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, and/or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

Section 104(c)(1) of CERCLA provides generally that the President may obligate the expenditure of CERCLA funds for Removal Actions for longer than one year, or in an amount greater than \$2 million, only in certain identified situations, one of which is where "continued response action is otherwise appropriate and consistent with the remedial action to be taken." 42 U.S.C. § 9604(c)(1)(C).

EPA's June 12, 1989 "Final Guidance on Implementation of the 'Consistency' Exemption to the Statutory Limits on Removal Actions" (Guidance) sets forth criteria for using the exemption. The criteria are satisfied in this case as follows:

- a. Consistency: The proposed Removal Action does not foreclose the remedial action. The proposed Removal Action is actually identical in part to the Remedial Action selected by EPA in December 2012. The Guidance notes that:

The 'remedial action to be taken' is the remedial action that, prior to the start of the removal action, was planned or could reasonably have been expected to be taken. Certainly, the actual performance of the activities that are part of a planned or expected remedial action are consistent with that action. It may turn out that after a removal done under a 'consistency' exemption, the Agency will decide not to take any further response action."

- b. Appropriateness: The proposed Removal Action is “appropriate” within the meaning of the guidance because it meets the following criteria:

The proposed Removal Action will be taken to avoid threats presented by contaminated soil currently located on the Property. The threats include VI at the buildings on the Property; the potential of contact threat from the soils exposed where the asphalt was removed; and the potential of increased contamination load on groundwater.

The proposed Removal Action will reduce the scope of future cleanup and the potential for harm to human health and the environment. The contaminated soils that will be addressed in this Removal Action will not need to be addressed again in future remedial actions because they will have been removed from the Site. As such, the scope of future Remedial Actions regarding the groundwater will be decreased as the source of a significant contributor to the groundwater contamination at the Site will have been removed.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Background

In December 2012, EPA Region 3 issued a Record of Decision (ROD) announcing the selection of an interim remedial action for implementation at the Site. In the ROD, EPA identified two objectives for the interim cleanup action:

- Minimize contaminant migration to groundwater from highly contaminated soils on the Property located outside the footprint of the buildings on the Property.
- Reduce the risk to acceptable levels from direct contact with highly contaminated soils on the Property outside the footprint of the buildings on the Property.

To determine specific areas where excavation and removal of soils would occur to meet these objectives, the Remedial Program engaged a multi-step approach that generally involved the following:

Identification of Contaminants of Concern

- Data showing contamination in soils was evaluated against the EPA Region 3 Regional Screening Level Table (June 2011) to identify substances at levels exceeding 1×10^{-6} or a Hazard Index of 0.1 using the “residential direct contact” and “soil to groundwater exposure” scenarios.
- Each contaminant found at such levels was determined to be Contaminants of Concern (COC). The COCs are identified in Attachment B.

Migration of Contamination From Soil to Groundwater

- For each (COC), EPA calculated a soil concentration above which Site conditions would potentially yield a release to groundwater above the Maximum Contaminant Level (MCL) established under the Safe Drinking Water Act (this was referred to as the "MCL-based SSRG"). The MCL-based SSRG for each COC is identified in Attachment C. Soils containing COCs above the MCL-based SSRG concentration would be remediated.
- EPA further calculated for each COC a soil concentration above which Site conditions would potentially yield a release to groundwater above the more stringent Region 3 Tap Water Screening Levels (this was referred to as the TW-based SSRG"). The TW-based SSRG for each COC is identified in Attachment C. Soils not containing COCs above the TW-based SSRG would not be excavated since they would not present unacceptable risks nor result in any MCL exceedance.
- As for soils containing COCs at levels above the TW-based SSRG but below the MCL-based SSRG, a risk evaluation was performed to determine if a release of COCs from such soils into groundwater would result in an unacceptable level of risk (for carcinogens, total risk from all COCs greater than 1×10^{-4} ; for non-carcinogens, a Hazard Index greater than 1).

Contact Threats

- Soils containing COCs below the Region 3 Screening Levels (RSLs) for residential direct contact would not be remediated as they do not present unacceptable risks. The RSLs for each COC are identified in Attachment C.
- For soils containing contaminants above levels above the RSLs, a risk evaluation was conducted to determine if direct contact with such soils would result in an unacceptable level of risk (as described above). Soils presenting unacceptable risk would be excavated.

The Remedial Program modified the above-described determinations to rule out cleanup of COCs below background concentrations. For each sample location outside the building footprints, the COC concentrations were compared with the MCL-based SSRG, TW-based SSRG, direct contact RSL, and background level to make a cleanup determination. The parameters for the cleanup decision were summarized in a matrix (Table 3 of the ROD) as follows:

COC concentration in soil	Action to be taken
Greater than or equal to MCL-SSRG	Cleanup
Less than MCL-SSRG (or no MCL-SSRG exists), but greater than or equal to TW-SSRG or Direct Contact RSL	Conduct risk evaluation If $TR > 1E-04$ or $HI > 1$, remediate.
Less than both TW-SSRG and Direct Contact RSL	No action
Less than Background	No action

Application of the matrix to the sample data facilitated the identification of the areas to be cleaned up. These areas were identified in Figure 5 of the ROD.

The OSC has reviewed and considered the cleanup objectives articulated in the December 2012 ROD, relevant sampling data, the methodology used in the ROD to identify the COCs, the identification of COCs, the methodology used to identify locations where excavation would be necessary to achieve the cleanup objectives, and the conclusions reached by the Remedial Program regarding cleanup at each location identified in Table 5 of the ROD. The OSC concurs with all of the above and concludes that the proposed actions below are appropriate to abate, prevent, minimize, stabilize, mitigate, and/or eliminate the threat to public health or welfare or to the environment presented by the release and/or threatened release of hazardous substances at the Site:

B. Proposed Action Description

1. Mobilize necessary personnel, supplies and equipment to the Site.
2. Provide security to limit access to working areas.
3. Construct walkways, as needed, to permit safe parking and access to the businesses on the Property by employers, employees, patrons, and the public during the response.
4. Except as described in (5) below, excavate soil at the Property located in the "Soil Source Areas" identified in Attachment D hereto which:
 - a. contains one or more COCs at levels which equal or exceed the MCL-based SSRG;
 - b. contain one or more COCs at levels which, though less than the MCL-based SSRG but greater than or equal to the TW-based SSRG, present carcinogenic risk greater than 1×10^{-4} or a Hazard Index of greater than 1.
5. Soil adjacent to structures at the Property which triggers the excavation standards in item #4, above, will be excavated only if such excavation is possible without compromising the integrity of the structure.
6. Implement dust suppression and air monitoring to minimize exposure to airborne contaminants by employers, employees, and patrons of the business park and the public.
7. Perform confirmation sampling to ensure that all soils to be excavated in accordance with item #4, above, have been excavated.
8. Conduct TCLP or equivalent testing to determine if excavated soils contain RCRA hazardous waste.
9. Dispose of excavated soils containing no hazardous waste at an off-site RCRA Subtitle D (solid waste) facility in accordance with Section 121(d)(3) of CERCLA and 40 C.F.R. § 300.440 ; dispose of excavated soil containing hazardous waste at an off-Site Subtitle C (hazardous waste) facility in accordance with Section 121(d)(3) of CERCLA and 40 C.F.R. § 300.440.
10. Backfill excavations with clean fill and reinstall parking surfaces.
11. Demobilize personnel and equipment from the Site.

C. Contribution to Remedial Performance

The proposed Removal Action will facilitate planned and probable future remedial actions. In December 2012, EPA selected Remedial Action which included the excavation and off-site disposal of the soils that are the subject of the proposed Removal Action (see VI.A, above). The Remedial Program is expected to select additional Remedial Action to address, among other things, groundwater contamination following completion of the RI/FS for the Site. Implementation of the proposed Removal Action will reduce the scope of remedial action to be performed in the future by (1) eliminating the need to perform much of the work selected in the December 2012 ROD and (2) reducing the ongoing contaminant loading on groundwater which may slow the expansion of a contaminant plume.

D. Compliance with Applicable or Relevant and Appropriate Requirements ("ARARs")

The Removal Action will attain applicable or relevant and appropriate requirements (ARARs) to the extent practicable given the exigencies of the situation. In December 2012, EPA issued a ROD selecting Remedial Action that included excavation of the soils to be excavated in the proposed Removal Action. ARARs for the Remedial Action were identified in Table 5 of the ROD. On August 8, 2013, the OSC asked PADEP to identify any additional or different ARARs for the proposed Removal Action by September 30, 2013. The ARARs identified in the ROD are attached hereto as Attachment E.

E. Project Schedule

The OSC estimates that approximately twelve months will be required to complete the field activities outlined in Section VI.A above.

F. Estimated Costs

The proposed distribution of funding is as follows:

	Present Ceiling	Proposed Ceiling	Total
<u>Extramural Costs</u> <u>Regional Removal Allowance Costs</u> Total Cleanup ERRS Contractor Costs (This cost category includes estimates for ERRS, subcontractors, Notices to Proceed, and IAGs with other Federal Agencies.		\$2,100,000	\$2,100,000

<u>Extramural Costs Not Funded from the Regional Allowance</u>			
Total START, including multiplier costs		\$140,000	\$140,000
Subtotal Extramural Costs		\$2,240,000	\$2,240,000
Extramural Costs Contingency (20% of Subtotal, Extramural Costs; round to nearest thousand)		\$448,000	\$448,000
OSC authorized ceiling (EPA Delegation 14-2)	\$50,000	\$2,688,000	\$2,738,000
TOTAL REMOVAL ACTION PROJECT CEILING			\$2,738,000

VII. EXPECTED CHANGE IN SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If the proposed actions at the Site are not implemented or are delayed, the threat of a release of hazardous substances, pollutants, or contaminants will continue. This release could result in exposure to the public.

As explained above, high levels of contamination have been found at the Property as shallow as 1 – 2 feet below ground surface. The removal of portions of the asphalt surface has increased the potential for these contaminants to migrate downward into the groundwater, which might end up impacting the drinking water wells down gradient of the site, as a result of precipitation and laterally as a result of wind or other weather events.

VOC vapor has migrated from groundwater into spaces beneath the foundation of buildings at the Property. Sampling results showed concentrations of VOCs vapor at high concentrations underneath Buildings A and C. VOCs are migrating from beneath Building A into the air inside the building. VOCs are not presently migrating from beneath Building C into the air inside the building.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues pertaining to the Site.

IX. ENFORCEMENT

See attached Enforcement Confidential Addendum.

X. COSTS

The total EPA costs for this removal action, based upon full-cost accounting practices that will be eligible for cost recovery, are estimated below as follows¹:

Direct Extramural Costs:	\$2,738,000
Direct Intramural Costs:	\$164,280
Total Direct Costs	\$2,902,280
Indirect Costs	\$2,085,810
Estimated EPA Costs for the Removal Action	\$4,988,090

X. RECOMMENDATION

This Action Memorandum represents the selected Removal Action for the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania, developed in accordance with CERCLA, as amended, and not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

By signing this Action Memorandum, you are also hereby establishing the documents listed below as the Administrative Record supporting the issuance of this Action Memorandum, pursuant to Section 113 (k) of CERCLA and EPA Delegation No. 14-22.

1. VI sampling documentation
2. Focused Feasibility Study, EPA 2012
3. Record of Decision, Operable Unit 1, Chem-Fab Superfund Site, EPA 2012
4. Administrative Record supporting issuance of Record of Decision, Operable Unit 1, Chem-Fab Superfund Site, EPA 2012.

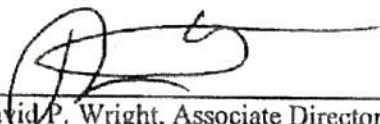
Because conditions at the Chem-Fab Site meet the Removal Action requirements of Section 300.415 of the NCP, 40 C.F.R. § 300.415, I recommend your approval of the proposed Removal Action. The total Removal Action Project Ceiling, if approved, will be \$2,738,000. Of this, an estimated \$2,100,00 comes from the Regional Removal Allowance. Please indicate your approval or disapproval below.

¹Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

Action by the Approving Official:

I have reviewed the above-stated facts and based upon those facts and the information compiled in the documents described above, I hereby determine that the release or threatened release of hazardous substances at and/or from the Site presents or may present an imminent and substantial endangerment to the public health or welfare or to the environment. I concur with the recommended removal action as outlined and establish the documents identified above as the administrative record supporting selection of this action.

APPROVED:



David P. Wright, Associate Director
Office Preparedness and Response
EPA Region 3

DATE:

9/19/13

DISAPPROVED:

David P. Wright, Associate Director
Office Preparedness and Response
EPA Region 3

DATE: _____

Attachments:

- A. Site Figure
- B. Contaminants of Concern
- C. Region III Screening Levels
- D. Soil Source Areas
- E. ARARs Identified in ROD

Attachment A

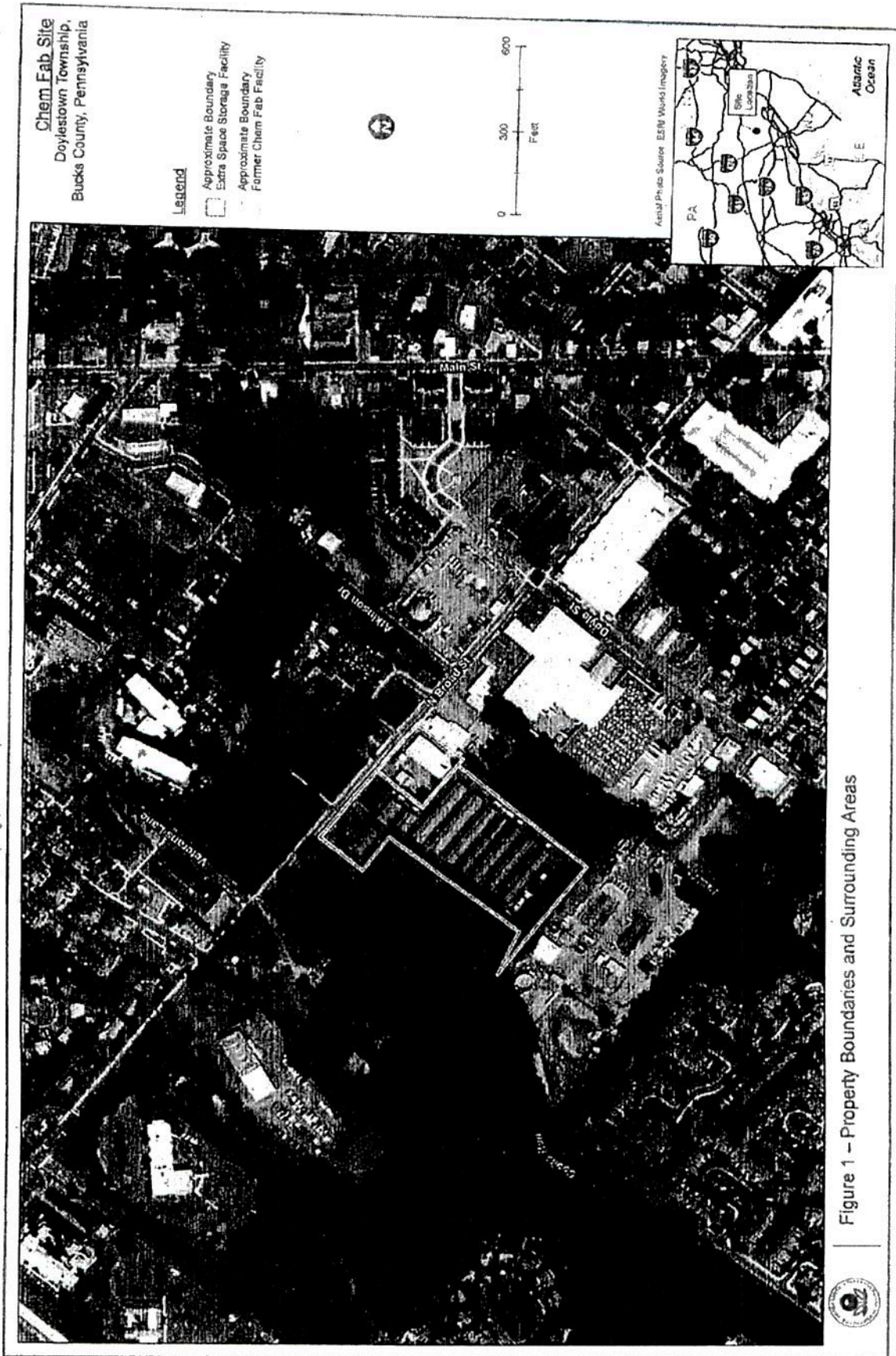


Table 2: Soil Cleanup Decision Parameters

Attachment B

Contaminant (Metal)	Soil to Groundwater		Direct Contact RSL	Background	Units
	MCL-SSRG	TW-SSRG			
Aluminum		291000	7700	20502	mg/kg
Antimony	1260	314	3.1	1.5	mg/kg
Arsenic	20.6	0.0925	0.39	6.55	mg/kg
Barium	4320	1580	1500	395	mg/kg
Cadmium	19.7	7.1	7	1.4	mg/kg
Chromium [VI]	101	0.0433	0.29		mg/kg
Cobalt		0.589	2.3	21.5	mg/kg
Copper	1720	198	310	15.7	mg/kg
Iron		30000	5500	36700	mg/kg
Lead	212		40	43.2	mg/kg
Manganese		301	180	2630	mg/kg
Mercury	5.48	0.156	0.56	0.108	mg/kg
Nickel		250	150	34.5	mg/kg
Selenium	145	52.1	39		mg/kg
Silver		85.1	39		mg/kg
Thallium	7.47	0.138	0.078	0.628	mg/kg
Vanadium		944	39	57.8	mg/kg
Zinc		3590	2300		mg/kg
Contaminant (VOC)	Soil to Groundwater		Direct Contact RSL	Background	Units
	MCL-SSRG	TW-SSRG			
Acetone		26	6100		mg/kg
Benzene	0.156	0.0128	1.1		mg/kg
Chloroform	1.28	0.00305	0.29		mg/kg
Chloromethane (methyl chloride)		0.268	12		mg/kg
Dichlorobenzene, 1,2-	37.1	2.29	190		mg/kg
Dichloroethane, 1,1-		0.039	3.3		mg/kg
Dichloroethene, 1,2-		0.565	70		mg/kg
Dichloroethene, cis-1,2-	1.2	0.125	16		mg/kg
Dichloromethane (methylene chloride)	0.0734	0.0705	11		mg/kg
Ethylbenzene	49.5	0.106	5.4		mg/kg
Hexanone, 2-		0.06034	21		mg/kg
Methyl tertyl-butyl ether		0.157	43		mg/kg
Tetrachloroethene	0.129	0.00283	0.55		mg/kg
Toluene	42.8	9.85	5000		mg/kg
Trichloroethane, 1,1,1-	3.79	17.3	870		mg/kg
Trichloroethene	0.102	0.0409	2.8		mg/kg
Vinyl Chloride	0.0341	0.000273	0.06		mg/kg
Xylenc, m,p-	622	1.24	63		mg/kg
Contaminant (SVOC)	Soil to Groundwater		Direct Contact RSL	Background	Units
	MCL-SSRG	TW-SSRG			
Benzo[a]anthracene		0.673	0.15		mg/kg
Benzo[a]pyrene	15.4	0.223	0.015		mg/kg
Benzo[a]fluoranthene		2.28	0.15		mg/kg
Benzyl butyl phthalate		33.2	260		mg/kg
Bis(2-ethylhexyl) phthalate	94.1	75.3	35		mg/kg
Dimethylphenol, 2,4-		5.54	120		mg/kg
Methylnaphthalene, 2-		50.4	310		mg/kg
Naphthalene		0.0299	3.6		mg/kg
Nitrosodiphenylamine, n-		4.99	99		mg/kg
Trichlorobenzene, 1,2,4-	13.3	0.435	22		mg/kg

EPA Regional Screening Level (RSL) Table June 2011 used
MCL-SSRG = Maximum Contaminant Level-based Site Specific Remedial Goal
TW-SSRG = Tap Water Risk Screening Level-based Site Specific Remedial Goal
Direct Contact RSL corresponds to TR=1E-06 or HI=0.1
Background values only exist for Metals

Table 1: Chemicals Exceeding EPA Regional Screening Levels (RSLs) in Soil

Attachment C

Contaminant (Metal)	Maximum Detection	Residential Direct Contact		Soil to Groundwater		Units
		TR=1E-06	HI=0.1	TR=1E-06	HI=0.1	
Aluminum	31100		7700		5500	mg/kg
Antimony	44.2		3.1		0.066	mg/kg
Arsenic	35.9	0.39	2.2	0.0013		mg/kg
Barium	914		1500		30	mg/kg
Cadmium	2.17	1800	7		0.14	mg/kg
Chromium (VI)	781	0.29	23	0.00083		mg/kg
Cobalt	109	370	2.3		0.049	mg/kg
Copper	196		310		5.1	mg/kg
Iron	58200		5500		64	mg/kg
Lead	521		40		1.4	
Manganese	4030		180		5.7	mg/kg
Mercury	0.6		1		0.0033	mg/kg
Nickel	271	13000	150		4.8	mg/kg
Selenium	1.74		39		0.095	mg/kg
Silver	1.43		39		0.16	mg/kg
Thallium	1.2		0.078		0.0026	mg/kg
Vanadium	66.7		39		18	mg/kg
Zinc	294		2300		68	mg/kg
Contaminant (VOC)	Maximum Detection	Residential Direct Contact		Soil to Groundwater		Units
		TR=1E-06	HI=0.1	TR=1E-06	HI=0.1	
Acetone	1.7		6100		0.45	
Benzene	0.042	1.1	8.6	0.00021		mg/kg
Chloroform	0.009	0.29	21	0.000053		mg/kg
Chloromethane (methyl chloride)	0.132		12		0.0049	mg/kg
Dichlorobenzene, 1,2-	0.58		190		0.036	mg/kg
Dichloroethane, 1,1-	0.002	3.3	1600	0.00069		mg/kg
Dichloroethene, 1,1-	0.008		24		0.012	mg/kg
Dichloroethene, 1,2-	7.2		70		0.0097	mg/kg
Dichloroethene, cis-1,2-	6.06		16		0.0021	mg/kg
Dichloromethane (methylene chloride)	0.752	11	170	0.0012		mg/kg
Ethylbenzene	41	5.4	350	0.0017		mg/kg
Hexanone, 2-	0.67		21		0.0011	mg/kg
Methyl tert-butyl ether	0.007	43	1700	0.0028		mg/kg
Tetrachloroethene (PCE)	190	0.55	37	0.000049		mg/kg
Toluene	20		500	1.6		mg/kg
Trichloroethane, 1,1,1-	11		870		0.32	mg/kg
Trichloroethylene (TCE)	4000	2.8	2.5	0.00072		mg/kg
Vinyl Chloride	0.23	0.06	7.4	0.0000056		mg/kg
Xylene, m,p-	130		63		0.02	mg/kg
Contaminant (SVOC)	Max. Detect	Residential Direct Contact		Soil to Groundwater		Units
		TR=1E-06	HI=0.1	TR=1E-06	HI=0.1	
Benzo[a]anthracene	0.187	0.15		0.01		mg/kg
Benzo[a]pyrene	0.148	0.015		0.035		mg/kg
Benzo[b]fluoranthene	0.121	0.15		0.035		mg/kg
Benzyl butyl phthalate	0.612	260	1200	0.51		mg/kg
Bis(2-ethylhexyl) phthalate	2.53	35	12	1.1		mg/kg
Dimethylphenol, 2,4-	0.4		120		0.086	mg/kg
Methylnaphthalene, 2-	2.66		31		0.075	mg/kg
Naphthalene	8.3	3.6	14	0.00047		mg/kg
Nitrosodiphenylamine, n-	0.131	99		0.075		mg/kg
Trichlorobenzene, 1,2,4-	0.099	22	6.2	0.0068		mg/kg

EPA Regional Screening Level (RSL) Table June 2011 used
 TR= Carcinogenic Target Risk
 HI= Noncancer Hazard Index
BOLD VALUES denote an exceedance of the RSL

Chem Fab Site
 Doylestown Township,
 Bucks County, Pennsylvania

Legend

- Soil Source Areas
- Exceeds MCL SSRG
 - Failed Risk Evaluation
 - Does not exceed MCL SSRG or fail the risk evaluation
 - Approximate Boundary
 - Extra Space Storage Facility
 - Approximate Boundary
 - Former Chem Fab Facility

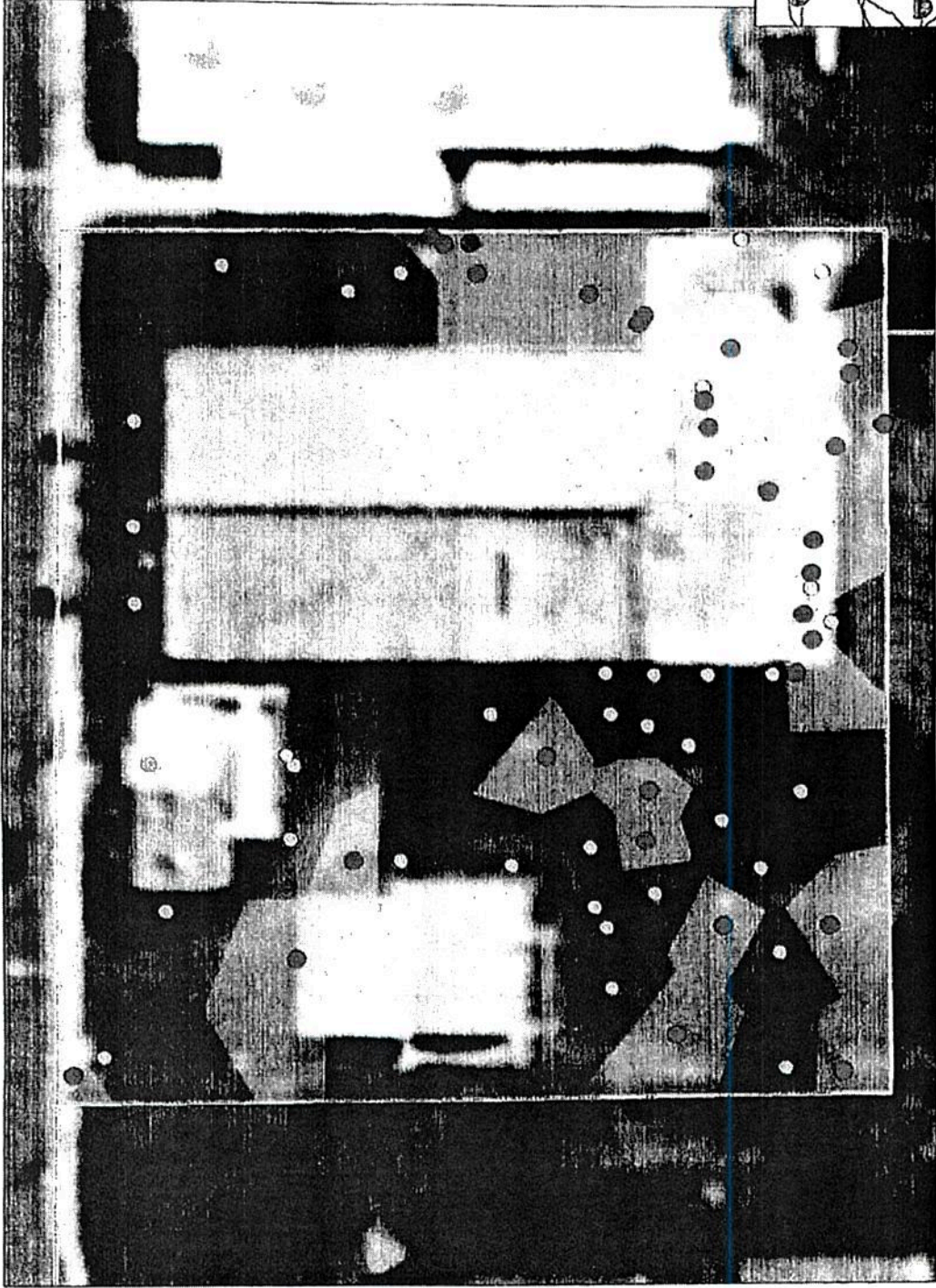
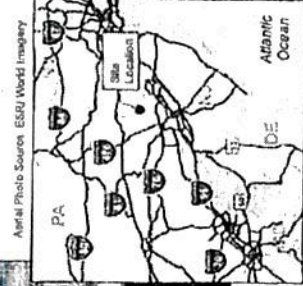
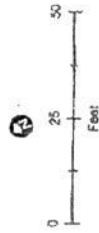


Figure 5 - Soil Remediation Areas



Table 5
 Summary of Applicable or Relevant and Appropriate Requirements (ARARs)
 Chem Fab Superfund Site
 Operable Unit 01


Attachment E

ARAR	LEGAL CITATION	CLASSIFICATION	SUMMARY OF REQUIREMENT	FURTHER DETAIL REGARDING ARARs IN THE CONTEXT OF THE REMEDY
Erosion and Sediment Control	25 Pa Code 102.4(b)(1) and (4), 102.11, 102.22	Applicable	Identifies erosion and sediment control requirements and criteria for activities involving land clearing, grading and other earth disturbances and establishes erosion and sediment control criteria.	The substantive requirements of these regulations apply to construction activities at the site which disturb the ground surface, including clearing, grading, excavation and cap installation.
Identification of Hazardous Wastes	40 CFR § 261.20-24 25 Pa Code § 261a.1	Applicable	Defines and describes process for identifying hazardous wastes based on toxicity characteristic	With respect to each of these provisions, the Commonwealth provision is a Federal ARAR if the provision is part of the Commonwealth's authorized program.
Standards applicable to Generators of Hazardous Wastes	40 CFR § 262.10(a), (h) and 262.11(c)(1) 25 Pa Code § 262a.10 and 11	Applicable	These regulations establish standards for generators of hazardous wastes, including initiating shipments and determination of hazard characteristics. Activities at the site will meet the substantive requirements of these regulations.	The Commonwealth provision is a State ARAR if the provision is more stringent than the Federal provision (within the meaning of CERCLA) or if the Commonwealth provision is beyond the scope of the Federal provision.
Standards applicable to Generators of Hazardous Wastes	40 C.F.R. § 262.34 25 Pa Code § 262a.34	Applicable	Establishes requirements for temporary storage of hazardous wastes on-site. Any storage of hazardous substances excavated at the site will meet the substantive requirements of these regulations.	Otherwise, the Federal provision is a Federal ARAR.
Fugitive Air Emissions	25 Pa Code 123.1 - 123.2	Applicable	Establishes the fugitive dust regulation for particulate matter.	The excavation and any other construction activities will comply with these regulations.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SUBJECT: Request for a Scope Change for the Removal Action at the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania.

FROM: Eduardo Rovira, Jr., On-Scene Coordinator
Eastern Response Branch (3HS31) 

TO: David P. Wright, Director
Office of Preparedness and Response (3HS30)

I. PURPOSE

The purpose of this "Request for a Scope Change" ("Change of Scope") is to document the need for a change of scope for a previously selected Removal Action to prevent or mitigate the threat posed by the release or substantial threat of release of hazardous substances, pollutants or contaminants at the Chem-Fab Site (the "Site") located in Doylestown Borough, Bucks County, Pennsylvania.

On November 8, 2012, using authority provided under EPA Delegation 14-2, the On-Scene Coordinator ("OSC") authorized the expenditure of funds in an amount not to exceed \$50,000 to initiate a removal action intended to reduce VOCs in suites inside an office building located 300-360 North Broad Street ("Property"), which Property is included within the Site. To accomplish this, the OSC installed portable air purifiers into selected suites within the impacted building. The OSC subsequently collected additional data to evaluate the efficacy of such units combined with the existing building vapor mitigation system in reducing VOCs levels within the building.

In January 2012, the Remedial Program completed a Focused Feasibility Study intended to evaluate alternatives to address threats presented by soils located at the Property. In December 2012, the Remedial Program issued a Record of Decision (ROD) selecting remedial action consisting of, among other things, the removal and off-site disposal of certain contaminated soils on the Property outside the footprint of the three commercial buildings on the Property.

Based on the data collected (see Section III of the Original Action Memo), potential future conditions at the Site, the extent of contamination and other reasons (e.g., lack of Remedial and State funding to do the work), the OSC determined that continued Removal Action was necessary to mitigate or prevent a threat to public health and that a change of scope, additional funding, and an exemption to the 12-month limit were required to perform such action.

On September 19, 2013, EPA issued an Action Memorandum approving a scope change, the expenditure of additional funds, and an exemption to the statutory funding and time limits on the Removal Action. The selected Removal Action consisted primarily of the excavation and off-site disposal of certain contaminated soils presently located at the Property.

This Change of Scope proposes to additionally address the threat to public health from groundwater impacted by the contaminated soils on the Property. Hazardous substances in soils at the Property have been determined to be responsible for contaminant vapor intrusion ("VI") into a commercial building on the Property and for groundwater contamination that has impacted two private supply wells down gradient from the Property. Under this Change of Scope, bottled water will be provided to one private property where such impacts are significant. The need to connect such property to public water will be decided in the near future; however, based on the results of the sampling, there is an immediate need to provide the occupants of this property with bottled water.

The Site is on the NPL and is currently the subject of an ongoing Remedial Investigation by the Remedial Program.

At this time there is no need for additional CERCLA funding. This Action Memorandum incorporates and supplements the previous Action Memorandum, signed by the Associate Director of the Office of Preparedness and Response on September 19, 2013. Where information is unchanged from the previous documents, the reader is referred to that document.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Physical Location/Site Characteristics

Please refer to attached September 2013 Action Memorandum.

2. Site Background

Please refer to attached September 2013 Action Memorandum.

3. Quantities and Types of Substances Present

On November 21, 2013, the EPA Region 3 Remedial Program collected samples from private wells on properties located along the path of the suspected groundwater plume (on North West Street). Site-related contamination was found, at levels of concern, in one such well.

Such well was resampled on January 6, 2014. During this sampling event, groundwater from the well had exceedances of the MCL for TCE. The charts below shows the levels of Site-related contaminants found in the well.

Groundwater Contaminant Levels at the Residential Property

November 21, 2013:

COC	Result (ug/L)
Cis-1,2-Dichloroethene	0.53
Tetrachloroethene	2.2
Trichloroethene	3.7

January 6, 2014:

COC	Result (ug/L)
Cis-1,2-Dichloroethene	1.2
Tetrachloroethene	3
Trichloroethene	<u>21</u>

Underlined value indicates exceedance of EPA MCL.

For additional information, please refer to attached September 2013 Action Memorandum.

4. National Priorities List

Please refer to attached September 2013 Action Memorandum.

5. State and Local Authorities' Roles

The OSC communicated with the Pennsylvania Department of Environmental Protection (PADEP) and the state does not have the resources to provide bottled water to the affected parties at this time.

For additional information, please refer to the attached September 2013 Action Memorandum.

B. Actions to Date

1. Previous Actions

Please refer to attached September 2013 Action Memorandum.

2. Current Actions

The current Removal Action consists of excavation and off-site disposal of certain soils outside of the footprint of the buildings at the property.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

As explained in Section II.A.3, above, site-related contamination has been detected in groundwater samples from a private residential well located within a mile of the Site. The contamination in the well exceeds EPA's MCL for TCE. After reviewing the data, EPA has determined that this level presents an unacceptable level of risk to the occupants at the residential property. At this point, the unacceptable risk is associated solely with drinking the water. Direct contact and inhalation risks (e.g., showering) will be calculated again when more data points are obtained from future sampling.

For additional information, please refer to attached September 2013 Action Memorandum.

IV. ENDANGERMENT DETERMINATION

Please refer to attached September 2013 Action Memorandum.

V. EXEMPTION FROM STATUTORY LIMITS

Please refer to attached September 2013 Action Memorandum.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Action Description

EPA will be providing bottled drinking water for the occupants at the residential property. It is anticipated the water will be provided for a duration of up to six months; at that time, a decision to extend the provision of bottled water will be made. Additional sampling from the wells located along the suspected path of the groundwater plume will be conducted. Once the results are back, the option/need to provide bottled water to additional properties and/or to connect the impacted properties to public water will be examined and determined.

B. Contribution to Remedial Performance

Please refer to attached September 2013 Action Memorandum.

C. Applicable or Relevant and Appropriate Requirements ("ARARs")

Please refer to attached September 2013 Action Memorandum.

D. Project Schedule

See Section VI.A, above.

E. Estimated Costs

Based on the number of affected properties, the anticipated length of time bottled water will be provided, the on-going actions at the Site and current Removal Action Project Ceiling, the need for additional funding is not required at this time.

Once the option/need of providing additional bottled water and/or connecting affected parties to public water is examined and determined, then the need for additional funding for these actions will be determined.

VII. EXPECTED CHANGE IN SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If the proposed action is not implemented or is delayed, the people drinking the water from the well at the residential property will continue to be exposed to the unacceptable risk from the ingestion of TCE.

For additional information, please refer to attached September 2013 Action Memorandum.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues pertaining to the Site.

IX. ENFORCEMENT

Please refer to attached September 2013 Action Memorandum.

X. COSTS

See Section VI.E, above.

For additional information, please refer to attached September 2013 Action Memorandum.

XI. RECOMMENDATION

This Action Memorandum represents a Change of Scope to the selected Removal Action for the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania, developed in accordance with CERCLA, as amended, and not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

By signing this Action Memorandum, you are also hereby adding the document listed below to the Administrative Record supporting the issuance of this Action Memorandum

and this Scope Change, pursuant to Section 113(k) of CERCLA and EPA Delegation No. 14-22:

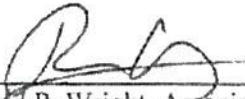
1. Water sample results from affected wells, collected on 11/21/13 and 01/06/14.

Because conditions at the Chem-Fab Site meet the Removal Action requirements of Section 300.415 of the NCP, 40 C.F.R. § 300.415, I recommend your approval of the proposed Scope Change. The total Removal Action Project Ceiling, if approved, will remain at \$2,738,000. Of this, an estimated \$2,100,00 comes from the Regional Removal Allowance. Please indicate your approval or disapproval below.

Action by the Approving Official:

I have reviewed the above-stated facts and based upon those facts and the information compiled in the documents described above, I hereby determine that the release or threatened release of hazardous substances at and/or from the Site presents or may present an imminent and substantial endangerment to the public health or welfare or to the environment. I concur with the recommended removal action as outlined and establish the document identified above as an addition to the administrative record supporting selection of the Removal Action as modified herein.

APPROVED:



David P. Wright, Associate Director
Office Preparedness and Response
EPA Region 3

DATE:

5/28/14

DISAPPROVED:

David P. Wright, Associate Director
Office Preparedness and Response
EPA Region 3

DATE: _____

Attachments:

- A. Original Action Memo



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SUBJECT: Request for a Scope Change to Continue the Removal Action at the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania.

FROM: Eduardo Rovira, Jr., On-Scene Coordinator
Eastern Response Branch (3HS31)

TO: David P. Wright, Acting Director
Office of Preparedness and Response (3HS30)

012015

I. PURPOSE

The purpose of this "Request for a Scope Change to Continue the Removal Action ("Change of Scope")" is to document the need for a change of scope for a previously selected Removal Action to prevent or mitigate the threat posed by the release or substantial threat of release of hazardous substances, pollutants or contaminants at the Chem-Fab Site (the "Site") located in Doylestown Borough, Bucks County, Pennsylvania.

On November 8, 2012, using authority provided under EPA Delegation 14-2, the OSC authorized the expenditure of funds in an amount not to exceed \$50,000 to initiate a Removal Action intended to reduce VOCs in suites inside an office building located on 300 – 600 North Broad Street ("Property"), which Property is included within the Site. To accomplish this, the OSC installed portable air purifiers into selected suites within the impacted building. The OSC subsequently collected additional data to evaluate the efficacy of such units combined with the existing building vapor mitigation system in reducing VOCs levels within the building.

In January 2012 the Remedial Program completed a Focused Feasibility Study intended to evaluate alternatives to address threats presented by soils located at the Property. In December 2012, the Remedial Program issued a Record of Decision (ROD) selecting a remedial action consisting of, among other things, the removal and off-site disposal of certain contaminated soils on the Property outside the footprint of the three commercial buildings on the Property.

Based on the data collected (see Section III of attached Action Memoranda), potential future conditions at the Site, the extent of contamination and other reasons (e.g., lack of Remedial and State funding to do the work), the OSC determined that continued Removal Action was necessary to mitigate or prevent a threat to public health and that a change of scope, additional funding, and an exemption to the 12-month limit were required to perform such action.

On September 19, 2013, EPA issued an Action Memorandum approving a scope change, the expenditure of additional funds, and an exemption to the statutory funding and time limits on the Removal Action ("Action Memo"). The selected Removal Action consisted primarily of the excavation and off-site disposal of certain contaminated soils presently located at the Property.

On May 28, 2014, EPA issued an Action Memorandum approving a scope change on the Removal Action ("Action Memo II"). This change of scope was to provide bottled water to the residence affected by contaminated groundwater impacted by the contaminated soils on the Property. Hazardous substances in soils at the Property were determined to be responsible for contaminant vapor intrusion ("VI") into a commercial building on the Property and groundwater contamination that has impacted two private supply wells down gradient from the Property.

This Change of Scope proposes to connect to public water the residence where such impacts, as described above, are significant.

The Site is on the NPL and is currently the subject of an ongoing Remedial Investigation by the Remedial Program.

At this time, the need for additional CERCLA funding is not needed. This Action Memorandum incorporates and supplements the previous Action Memoranda. Where information is unchanged from the previous documents, the reader is referred to that/those document(s).

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Physical Location/Site Characteristics

Please refer to attached September 2013 Action Memorandum. The location of the property to be connected to the public water supply is not disclosed to protect privacy interests.

2. Site Background

Please refer to attached September 2013 Action Memorandum.

3. Quantities and Types of Substances Present

EPA Region 3 Remedial/Removal Program have collected samples from the private well on three different occasions (11/13, 01/14 and 06/14) and have found site-related contamination each time, two of them (including the most recent)

above the MCL for TCE. Most of the occupants fall within a sensitive group population based on age.

TCE Levels at the Residential Property

Date	Result (µg/L)
November 21, 2013	3.7
January 6, 2014	<u>21</u>
June 9, 2014	<u>6.2</u>

Underlined value indicates exceedance of EPA MCL (5 µg/L).

For additional information, please refer to attached Action Memoranda.

4. National Priorities List

Please refer to attached September 2013 Action Memorandum.

5. State and Local Authorities' Roles

The OSC communicated with the Pennsylvania Department of Environmental Protection (PADEP) and the state does not have the resources to connect the affected party to public water at this time.

For more information, please refer to attached Action Memoranda.

B. Actions to Date

1. Previous Actions

Please refer to attached Action Memoranda.

2. Current Actions

A Removal Action, which consisted of excavation and off-site disposal of certain soils outside of the footprint of the buildings at the property, as included in the ROD, was conducted during the spring/summer 2014.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Please refer to attached Action Memoranda.

IV. ENDANGERMENT DETERMINATION

Please refer to attached September 2013 Action Memorandum.

V. EXEMPTION FROM STATUTORY LIMITS

Please refer to attached September 2013 Action Memorandum.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Action Description

Install a permanent connection to the affected residence from the Doylestown Township Municipal Authority water supply.

B. Contribution to Remedial Performance

Please refer to attached September 2013 Action Memorandum.

C. Applicable or Relevant and Appropriate Requirements (“ARARs”)

Please refer to attached September 2013 Action Memorandum.

D. Project Schedule

The affected residence would be connected to public water as soon as practicable.

E. Estimated Costs

The cost of connecting the affected residence to the Doylestown Township Municipal Authority water supply is estimated not to exceed \$50,000. There is currently enough money in the Removal Action Project Ceiling to continue to provide water to the affected property owner until it is connected to public water and to connect it to public water.

VII. EXPECTED CHANGE IN SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Please refer to attached September 2013 Action Memorandum.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues pertaining to the Site.

IX. ENFORCEMENT

Please refer to attached September 2013 Action Memorandum.

X. COSTS

See Section VI.E above.

For additional information, please refer to attached Action Memoranda.

XI. RECOMMENDATION

This Action Memorandum represents a Change of Scope of the selected Removal Action for the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania, developed in accordance with CERCLA, as amended, and not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

By signing this Action Memorandum, you are also hereby establishing the documents listed below as the Administrative Record supporting the issuance of this Action Memorandum, pursuant to Section 113 (k) of CERCLA and EPA Delegation No. 14-22. The document listed below is to be added to the existing Administrative Record, established when the September 19, 2013 Action Memo was signed.

- I. Water sample results from affected well, collected on 06/09/14.

Because conditions at the Chem-Fab Site meet the Removal Action requirements of Section 300.415 of the NCP, 40 C.F.R. § 300.415, I recommend your approval of the proposed Removal Action. The total Removal Action Project Ceiling, if approved, will remain at \$2,738,000. Of this, an estimated \$2,100,00 comes from the Regional Removal Allowance. Please indicate your approval or disapproval below.

Action by the Approving Official:

I have reviewed the above-stated facts and based upon those facts and the information compiled in the documents described above, I hereby determine that the release or threatened release of hazardous substances at and/or from the Site presents or may present an imminent and substantial endangerment to the public health or welfare or to the environment. I concur with the recommended removal action as outlined and establish the documents identified above as the administrative record supporting selection of this action.

APPROVED:



David P. Wright, Associate Director
Office Preparedness and Response
EPA Region 3

DATE:

1/20/15

DISAPPROVED:

David P. Wright, Associate Director
Office Preparedness and Response
EPA Region 3

DATE:

Attachments:

- A. September 19, 2013 Action Memorandum
- B. May 28, 2014 Action Memorandum



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SUBJECT: Request for a Scope Change to Continue the Removal Action at the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania.

FROM: *Eduardo Rovira, Jr.*
Eduardo Rovira, Jr., On-Scene Coordinator
Eastern Response Branch (3HS31)

TO: Bonnie G. Gross, Associate Director
Office of Preparedness and Response (3HS30)

I. PURPOSE

The purpose of this "Request for a Scope Change to Continue the Removal Action ("Change of Scope")" is to document the need for a change of scope for a previously selected Removal Action to prevent or mitigate the threat posed by the release or substantial threat of release of hazardous substances, pollutants or contaminants at the Chem-Fab Site (the "Site") located in Doylestown Borough, Bucks County, Pennsylvania.

On November 8, 2012, using authority provided under EPA Delegation 14-2, the OSC authorized the expenditure of funds in an amount not to exceed \$50,000 to initiate a Removal Action intended to reduce VOCs in suites inside an office building located on 300 - 600 North Broad Street ("Property"), which Property is included within the Site. To accomplish this, the OSC installed portable air purifiers into selected suites within the impacted building. The OSC subsequently collected additional data to evaluate the efficacy of such units combined with the existing building vapor mitigation system in reducing VOCs levels within the building.

In January 2012 the Remedial Program completed a Focused Feasibility Study intended to evaluate alternatives to address threats presented by soils located at the Property. In December 2012, the Remedial Program issued a Record of Decision (ROD) selecting a remedial action consisting of, among other things, the removal and off-site disposal of certain contaminated soils on the Property outside the footprint of the three commercial buildings on the Property.

Based on the data collected (see Section III of attached Action Memoranda), potential future conditions at the Site, the extent of contamination and other reasons (e.g., lack of Remedial and State funding to do the work), the OSC determined that continued Removal Action was necessary to mitigate or prevent a threat to public health and that a change of scope, additional funding, and an exemption to the 12-month limit were required to perform such action.

On September 19, 2013, EPA issued an Action Memorandum approving a scope change, the expenditure of additional funds, and an exemption to the statutory funding and time limits on the Removal Action ("Action Memo"). The selected Removal Action consisted primarily of the excavation and off-site disposal of certain contaminated soils presently located at the Property.

On May 28, 2014, EPA issued an Action Memorandum approving a scope change on the Removal Action ("Action Memo II"). This change of scope was to provide bottled water to the residence affected by contaminated groundwater impacted by the contaminated soils on the Property. Hazardous substances in soils at the Property were determined to be responsible for contaminant vapor intrusion ("VI") into a commercial building on the Property and groundwater contamination that has impacted two private supply wells down gradient from the Property.

On January 20, 2015, EPA issued an Action Memorandum approving a scope change on the Removal Action ("Action Memo III"). This change of scope was to install a permanent connection to the affected residence to the Doylestown Township Municipal Authority water supply.

This Change of Scope proposes to install a permanent depressurization system to reduce indoor TCE levels in Building A to levels that pose no unacceptable risk to the tenants and their patrons.

The Site is on the NPL and is currently the subject of an ongoing Remedial Investigation by the Remedial Program.

At this time, the need for additional CERCLA funding is not needed. This Action Memorandum incorporates and supplements the previous Action Memoranda. Where information is unchanged from the previous documents, the reader is referred to that/those document(s).

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Physical Location/Site Characteristics

Please refer to attached September 2013 Action Memorandum.

2. Site Background

Please refer to attached September 2013 Action Memorandum.

3. Quantities and Types of Substances Present

EPA Region 3 Removal Program collected sub-slab and indoor air samples (Building A) in January and April 2015, and indoor air samples in June 2015. Results from the three sampling events were similar, with sub-slab TCE concentrations as high as 58,000 $\mu\text{g}/\text{m}^3$ and indoor as high as 27 $\mu\text{g}/\text{m}^3$.

EPA and ATSDR toxicologists reviewed the data and recommended that a permanent solution (e.g., negative pressure system) be installed to provide adequate ventilation of the sub-slab for the entire building. For additional information, please refer to attached Action Memoranda.

4. National Priorities List

Please refer to attached September 2013 Action Memorandum.

5. State and Local Authorities' Roles

The OSC communicated with the Pennsylvania Department of Environmental Protection (PADEP) and the state does not have the resources to install the depressurization system at this time.

For more information, please refer to attached Action Memoranda.

B. Actions to Date

1. Previous Actions

Please refer to attached Action Memoranda.

2. Current Actions

Extended the water main and connected the affected residence to the Doylestown Township Municipal Authority water supply. This work was completed the week of September 21, 2015.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Please refer to attached Action Memoranda.

IV. ENDANGERMENT DETERMINATION

Please refer to attached September 2013 Action Memorandum.

V. EXEMPTION FROM STATUTORY LIMITS

Please refer to attached September 2013 Action Memorandum.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Action Description

Install a permanent depressurization system to reduce indoor TCE levels in Building A to $8 \mu\text{g}/\text{m}^3$ or below, which level has been determined in this situation to pose no unacceptable risk to the tenants and their patrons.

B. Contribution to Remedial Performance

Please refer to attached September 2013 Action Memorandum.

C. Applicable or Relevant and Appropriate Requirements ("ARARs")

Please refer to attached September 2013 Action Memorandum.

D. Project Schedule

The depressurization system will be installed sometime in October 2015.

E. Estimated Costs

The cost of installing the depressurization system has been estimated not to exceed \$50,000. There is currently enough money in the Removal Action Project Ceiling to cover the cost of the installation of the system.

VII. EXPECTED CHANGE IN SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Please refer to attached September 2013 Action Memorandum.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues pertaining to the Site.

IX. ENFORCEMENT

Please refer to attached September 2013 Action Memorandum.

X. COSTS

See Section VI.E above.

For additional information, please refer to attached Action Memoranda.

XI. RECOMMENDATION

This Action Memorandum represents a Change of Scope of the selected Removal Action for the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania, developed in accordance with CERCLA, as amended, and not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

By signing this Action Memorandum, you are also hereby establishing the documents listed below as the Administrative Record supporting the issuance of this Action Memorandum, pursuant to Section 113 (k) of CERCLA and EPA Delegation No. 14-22. The document listed below is to be added to the existing Administrative Record, established when the September 19, 2013 Action Memo was signed.

1. Sub-slab and indoor air samples from Building A, collected in January, April and June 2015.
2. Email from EPA toxicologists, dated 9/24/15.

Because conditions at the Chem-Fab Site meet the Removal Action requirements of Section 300.415 of the NCP, 40 C.F.R. § 300.415, I recommend your approval of the proposed Removal Action. The total Removal Action Project Ceiling, if approved, will remain at \$2,738,000. Of this, an estimated \$2,100,00 comes from the Regional Removal Allowance. Please indicate your approval or disapproval below.

Action by the Approving Official:

I have reviewed the above-stated facts and based upon those facts and the information compiled in the documents described above, I hereby determine that the release or threatened release of hazardous substances at and/or from the Site presents or may present an imminent and substantial endangerment to the public health or welfare or to the environment. I concur with the recommended removal action as outlined and establish the document identified above as the administrative record supporting selection of this action.

APPROVED:

Bonnie Gross
Bonnie G. Gross, Associate Director
Office Preparedness and Response
EPA Region 3

DATE:

9/30/15

DISAPPROVED:

Bonnie G. Gross, Associate Director
Office Preparedness and Response
EPA Region 3

DATE: _____

Attachments:

- A. September 19, 2013 Action Memorandum
- B. May 28, 2014 Action Memorandum
- C. January 20, 2015 Action Memorandum



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

JUN 10 2018

SUBJECT: Request for a Scope Change to the Removal Action at the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania.

FROM: Eduardo Rovira, Jr., On-Scene Coordinator
Eastern Response Branch (3HS31)

TO: Karen Melvin, Director
Hazardous Site Cleanup Division (3HS00)

THRU: Bonnie G. Gross, Associate Director *BGross*
Office of Preparedness and Response (3HS30)

I. PURPOSE

The purpose of this "Request for a Scope Change" ("Change of Scope") is to document the need for further changes in scope for a Removal Action selected for the Chem-Fab Site ("Site") located in Doylestown Borough, Bucks County, Pennsylvania. The Site was placed on the NPL in March 2008. A Remedial Investigation/Feasibility Study was commenced in September 2009 and is presently ongoing. The Removal program has provided ongoing assistance to the Remedial program as circumstances have warranted. The Office of Preparedness and Response has issued the following authorizations in connection with the instant Removal Action:

1. November 8, 2012: Special Bulletin (Air Purifiers)

On November 8, 2012, the OSC issued a Special Bulletin to initiate a Removal Action to reduce VOCs in suites inside a commercial office building located at 300-360 North Broad Street ("Property"), which Property is included within the Site. To accomplish this, the OSC installed portable air purifiers into selected suites within the impacted building.

2. September 19, 2013: Additional Funds, \$2 Million Exemption, and Scope Change (Soil Cleanup) ("Action Memo I")¹

¹ Action Memo I, which was approved over 10 months after the Special Bulletin was issued, was titled as an exemption to the \$2 million limit but did not expressly refer in the title to the 12-month limit on removal actions. Section V of Action Memo I, however, noted that "[s]ection 104(c)(1) of CERCLA provides generally that the President may obligate the expenditure of CERCLA funds for Removal Action for longer than one year, or in an amount greater than \$2 million, only in certain identified situations, one

In January 2012, the Remedial Program completed a Focused Feasibility Study intended to evaluate alternatives to address threats presented by soils located at the Property. In December 2012, the Remedial Program issued a Record of Decision ("ROD") selecting a remedial action consisting of, among other things, the removal and off-site disposal of certain contaminated soils on the Property outside the footprint of the three commercial buildings on the Property. Based on the data collected, potential future conditions at the Site, the extent of contamination, and other reasons (including the lack of Remedial and State funding to do the work), the OSC determined that additional Removal Action was necessary. The work selected under this authorization consisted primarily of the excavation and off-site disposal of soils which were identified for action in the ROD.

3. *May 28, 2014: Scope Change (Bottled Water to Resident) ("Action Memo II")*

In November 2013, the Remedial Program collected samples from private drinking water wells located along the path of the suspected groundwater plume at the Site. Site-related contamination was found at levels of concern in one of these wells. On May 28, 2014, EPA issued Action Memo II to provide bottled water to the residence affected by contaminated groundwater.

4. *January 20, 2015: Scope Change (Connection to Water Line) ("Action Memo III")*

On January 20, 2015, EPA issued Action Memo III to connect the residence receiving bottled water under Action Memo II to the Doylestown Township Municipal Authority water supply.

5. *September 30, 2015: Scope Change (Depressurization System) ("Action Memo IV")*

On September 30, 2015, EPA issued Action Memo IV to replace the air purifiers installed in the commercial building described in the Special Bulletin with a permanent depressurization system designed to reduce indoor TCE levels to 8 $\mu\text{g}/\text{m}^3$ or below.

This Change of Scope proposes to (1) fix a water issue which resulted as a consequence of the action taken under Action Memo III, and (2) replace and reconfigure a component of the depressurization system (a fan) installed under Action Memo IV which failed as a result of a system design issue.

of which is where 'continued response action is otherwise appropriate and consistent with the remedial action to be taken.'" This clarifies that Action Memo I was intended as a request, based on the consistency exemption in CERCLA §104(c)(1)(C), for an exemption to the statutory limits as a whole.

There is no need for additional CERCLA funding at this time. This Action Memorandum incorporates and supplements the previous Action Memoranda. Where information is unchanged from the previous documents, the reader is referred to that/those document(s).

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Physical Location/Site Characteristics

Please refer to the attached Action Memo I.

2. Site Background

- a. **Water Issue:** Following the issuance of Action Memo III, EPA connected the impacted residence to the Doylestown Township Municipal Authority water supply. Approximately two and half months after the connection was completed the resident began to notice that the basement sump pump was running more frequently and that as time passed the problem got worse. As the problem got worse, the sump pump was running more frequently, which resulted in several sump pumps burning out. During a visit to the property after a rain event, the OSC witnessed the pump activate every 30 seconds.

On December 29, 2017, EPA contractors pumped water from the resident's well and discharged it to a marshy area adjacent to the house. Pumping continued for 45 minutes at a flow rate of about 10 gpm. Prior to the start of pumping, the sump pump activated approximately every 60 seconds. After five minutes of pumping (50 gallons) the sump pump activation frequency declined. Continued pumping resulted in increased pauses between sump pump activations. At 45 minutes (450 gallons) the sump pump activated every six and half minutes. From this exercise, the OSC concluded that there was a connection between the water level in the well and the water level in the sump and that, prior to connection to the water line, the resident was likely using enough water from the well to keep water out of the sump.

For more information see Action Memo III.

- b. **Fan Issue:** Following issuance of Action Memo IV, EPA installed a depressurization system at the Property. The system included 10 fans intended to run at all times. The fans create suction to draw soil gas from beneath the foundation of the impacted building into a pipe system for release into the atmosphere. One of the fans failed because it was installed too close to the ground where it could draw in water (this particular fan was installed very low on the building at the request of one of the tenants).

For more information see Action Memo IV.

3. Quantities and Types of Substances Present

See Action Memo III for information regarding contaminated groundwater at the affected residence. See the Special Bulletin and Action Memo IV for information regarding vapor intrusion in the commercial building at the Property.

4. National Priorities List

The Site was placed on the NPL in March 2008. A groundwater RI/FS is ongoing.

5. State and Local Authorities' Roles

- a. **Water Issue:** EPA worked with homeowner, Doylestown Township, and Doylestown Borough in an effort to correct the problem. The Township and Borough advised the OSC that they do not have the resources to implement a fix. The homeowner called eleven contractors; none were willing to do the work because of EPA involvement and the presence of contaminated groundwater.
- b. **Fan Issue:** On May 21, 2018 the property owner emailed the OSC stating that one of the fans (#7) was not working at all. The OSC stopped by the Site and confirmed that fan #7 was not working. The OSC checked the fan and noticed it was sucking debris and water. The OSC contacted the contractor who performed the installation. The contractor confirmed the OSC findings.
- c. A few weeks after the original installation of the system, fan #8 was sucking water and the issue was resolved by installing the unit higher off the ground.

B. Actions to Date

Please refer to the Special Bulletin and Action Memos III and IV for information regarding actions relevant to this Change of Scope.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Please refer to the Special Bulletin and Action Memos III and IV.

IV. ENDANGERMENT DETERMINATION

Please refer to Action Memo I.

V. EXEMPTION FROM STATUTORY LIMITS

Please refer to Action Memo I.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Action Description

a. Water Issue:

1. Increase the size of the existing sump pit to 18 inches across and 30 inches in depth (standard size). The existing one is only 14 inches across and 12 inches in depth. This will increase the volume of water the pit will be able to hold. It will also help prevent the sump pump from running as frequently, as the water level will take longer to fill the sump pit.
2. Run a 4-inch line and/or French Drain (based on the OSC's best judgment at the time the work is performed) to/from the sump pump area to the discharge area to minimize the volume of water that ends up in the sump pit.

b. Fan Issue:

1. Replace fan #7 and install the new unit at a higher elevation.
2. All other fans will be inspected and raised if needed, to avoid any potential future issues.

B. Contribution to Remedial Performance

Please refer to the Special Bulletin and Action Memos III and IV.

C. Applicable or Relevant and Appropriate Requirements ("ARARs")

No ARARs are associated with the work described herein.

D. Project Schedule

The work will take place in late July or early August 2018.

E. Estimated Costs

The cost of installing the pipe and/or French Drain and restoring the disturbed areas has been estimated not to exceed \$25,000. The cost of replacing fan #7 and installing it higher has been estimated not to exceed \$3,500. There is currently enough money

in the Removal Action Project Ceiling to cover the costs to deal with the water issue and the fan issue.

VII. EXPECTED CHANGE IN SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If the work described herein is not performed:

- The affected homeowner may need to continually replace burned out sump pumps and, in addition, might experience basement flooding during a period of pump failure or during a power outage.
- VOC levels in the impacted commercial building on the Property might climb to unacceptable levels.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues pertaining to the Site.

IX. ENFORCEMENT

Please refer to Action Memo I.

X. COSTS

See Section VI.E above.

For additional information, please refer to attached Action Memoranda.

XI. RECOMMENDATION

This Action Memorandum represents a Change of Scope of the selected Removal Action for the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania, developed in accordance with CERCLA, as amended, and not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

Because conditions at the Chem-Fab Site meet the Removal Action requirements of Section 300.415 of the NCP, 40 C.F.R. § 300.415, I recommend your approval of the proposed Change of Scope. The total Removal Action Project Ceiling, if approved, will remain at \$2,738,000. Of this, an estimated \$2,100,000 comes from the Regional Removal Allowance. Please indicate your approval or disapproval below.

Action by the Approving Official:

I have reviewed the above-stated facts and based upon those facts and the information in existing administrative records supporting selection of the underlying actions, I hereby determine that the release or threatened release of hazardous substances at and/or from the Site presents or may present an imminent and substantial endangerment to the public health or welfare or to the environment. I concur with the recommended removal action as outlined above.

APPROVED:



Karen Melvin, Director
Hazardous Site Cleanup Division
EPA Region 3

DATE: JUL 10 2018

DISAPPROVED:

Karen Melvin, Director
Hazardous Site Cleanup Division
EPA Region 3

DATE:

Attachments:

- A. Special Bulletin (November 8, 2012)
- B. Action Memo I (September 19, 2013)
- C. Action Memo II (May 28, 2014)
- D. Action Memo III (January 20, 2015)
- E. Action Memo IV (September 30, 2015)

FEDERAL ON-SCENE COORDINATOR'S AFTER ACTION REPORT

FOR THE

CHEM-FAB REMOVAL SITE

DOYLESTOWN, BUCKS COUNTY, PENNSYLVANIA

NOVEMBER 8, 2012, THROUGH, SEPTEMBER 30, 2016



UNITED STATES

ENVIRONMENTAL PROTECTION AGENCY

REGION III

PHILADELPHIA, PENNSYLVANIA

**Federal On-Scene Coordinator's After Action Report
Chem-Fab Removal Site**

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REGION III

FACT SHEET

CERCLA REMOVAL ACTION

SITE:	Chem-Fab Removal Site
SIZE:	250 acres
LOCATION:	Doylestown Township, Bucks County, Pennsylvania
APPROVAL DATE:	Original Funding Request November 8, 2012 Increase in Funding Request September 19, 2013
PROJECT DATES:	November 8, 2012 – December 2016
DESCRIPTION:	The Chem-Fab Removal site, located in a mixed residential, commercial and industrial area, operated as a metal plating facility from 1965 to approximately 1994. In 1995 the U.S. Environmental Protection Agency (EPA) removed more than 100 drums of hazardous substances and more than 8,000 gallons of chromic acid waste that had been left on the site. The Site was then referred to the Pennsylvania Department of Environmental Protection (PADEP). Since then PADEP has continued monitoring groundwater. A municipal well near the site was taken off-line to avoid the use of it as a drinking water source and nearby residences and businesses were connected to Doylestown's public water system. In 2010 PADEP turned the site over to the EPA.
NATIONAL PRIORITIES LIST STATUS:	The Chem-Fab Removal site is on the National Priorities List (NPL).
HAZARDOUS MATERIALS:	Groundwater wells located in the vicinity of the Chem-Fab Removal site were found to contain elevated levels of volatile organic compounds (VOCs), including trichloroethene (TCE), and tetrachloroethylene (PCE), and Hexavalent Chromium (Cr ⁶⁺).
QUANTITIES REMOVED:	Under the present removal action, approximately 2,440 tons of contaminated soil was excavated and shipped to a disposal facility.
ON-SCENE COORDINATOR:	Eduardo Rovira, Jr.

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Chem-Fab Removal Site**

REMOVAL CONTRACTOR:	NorthStar (formerly WRS) was the main removal contractor. NorthStar on-site subcontractors Passerini and Sons Inc. constructed the water main, Roher Mechanical Services Inc. constructed the plumbing inside the residential home and WPB Enterprises installed the depressurization system at the main building at the Site.
PROJECT CEILING:	\$ 2,738,000
ESTIMATED COSTS:	\$ 1,129,548

I. FOREWORD

As mandated by the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Title 40 of the *Code of Federal Regulations* (CFR), Part 300, the On-Scene Coordinator (OSC) is required to provide coordinated federal response capability at the scene of an unplanned or sudden release of oil or hazardous substance that poses a threat to the public welfare or the environment. In addition, the provisions of Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), promote a coordinated federal, state, and local response to mitigate situations at hazardous waste sites that pose an imminent and substantial threat to public health and/or the environment.

The hazardous substances in the soils at the Site have been determined to be responsible for contaminant vapor intrusion into a building on the property and groundwater contamination that has impacted groundwater wells. The conditions at the Chem-Fab Removal site presented an imminent and substantial threat to human health and the environment because of the uncontrolled release of a hazardous substance to groundwater, thereby providing a legal basis for federal response activities. The provisions of the NCP, Section 300.415, were implemented by U.S. EPA Region III of Philadelphia, Pennsylvania.

The OSC would like to thank all agencies and individuals who provided valuable assistance and expertise to ensure the successful completion of this cleanup effort.

Eduardo Rovira, Jr.
On-Scene Coordinator
U.S. EPA Region III
Philadelphia, Pennsylvania

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II. SUMMARY OF EVENTS

This report discusses the removal action performed at the Chem-Fab Removal site (the Site) in Doylestown Township, Bucks County, Pennsylvania, from November 8, 2012, through December 2016.

A. SITE CONDITIONS AND BACKGROUND

1. Initial Situation

Prior to construction of the former Chem-Fab facility, land use at the Site was mainly agricultural. The Chem-Fab facility was constructed in the mid-1960s. It operated as an electroplating and metal etching company until the early 1990s. Electroplating and metal etching operations generated wastes that included ferric chloride, mineral spirits, chromic acid rinse water and sludge, chromic acid, sulfuric acid, sodium bisulfate, sodium hydroxide, and lime. A TCE vapor degreasing process was used at the Site until 1973. In 1994 and 1995, EPA conducted a removal action at the Site. EPA removed 117 drums and 8,400 gallons of liquid wastes, including chromium-contaminated wastes, from the underground storage tanks (USTs) as well as other solid wastes and fuel oils. During the response action, EPA discovered information labeled on drums and other containers indicating the presence of xylene, toluene, hydrochloric acid, sulfuric acid, nitric acid, caustic soda, methyl isobutyl ketone, polymeric isocyanate, benzene sulfonic acid, nickel rinse waste, methylene chloride, ferric chloride, chromate waste acid, and anhydrous ammonia. PADEP continued its investigation and requested that EPA include the Site on the NPL. EPA proposed the Chem-Fab Removal Site for the NPL in September 2007. The Site was formally added to the NPL in March 2008. From September 2009 through May 2013, WESTON collected additional soil, groundwater, and vapor intrusion samples to supplement previous results from investigations conducted by PADEP. Based on the data collected, the EPA concludes that the concentrations of contaminants of concern (COCs) in soils at the Site present unacceptable risks for both direct contact and soil-to-groundwater pathways. In January 2012, EPA completed a Focused Feasibility Study (FFS) intended to identify alternatives for addressing threats presented by contamination outside the footprint of the buildings at the Site.

In December 2012, EPA Region 3 Issued a Record of Decision (ROD) announcing the selection of an interim remedial action for implementation at the Site. In the ROD, EPA identified two objectives for the interim cleanup action:

- Minimize contaminant migration to underground water from highly contaminated soils on the Site located outside the footprint of the buildings on the property.
- Reduce the risk to acceptable levels from direct contact with highly contaminated soils on the Site outside the footprint of the buildings on the property.

2. Site Location

The Chem-Fab facility is located at 300 through 360 North Broad Street in a mixed residential and commercial area of Doylestown Township, Bucks County, Pennsylvania. Doylestown Township comprises approximately 6,000 residences with a population of about 17,565 people. The approximate geographic coordinates of the center of the Site are 40.316° north latitude and -

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Chem-Fab Removal Site**

75.135° west longitude. The Site includes the former Chem-Fab facility, a storage facility, the Doylestown Borough wastewater treatment facility, numerous residential properties, portions of an elementary school, and William E. Neis Park, as identified on Figure 1, Site Layout Map. The Site is bordered to the east by an operating business, to the south and west by an active garage storage facility and to the north by North Broad Street.

There are three buildings located at the former Chem-Fab Facility. Building A, a one-story building, is the largest on the property and is currently being used as a business complex. Building B, a two-story building, is currently used as a residential and commercial space. Building C is a converted three-story home that is used for residential and commercial purposes. The locations of the three buildings are shown on Figure 2, Building Identification Map.

B. EFFORTS TO NOTIFY AND COMPEL POTENTIALLY RESPONSIBLE PARTIES TO RESPOND

To date, U.S. EPA has not compelled the Potentially Responsible Parties (PRPs) to respond to the environmental problems associated with the Site.

III. ORGANIZATION OF THE RESPONSE

A. NAMES AND ADDRESSES

Agency	Contact	Brief Description of Duties
U.S. EPA Region 3 1650 Arch Street Philadelphia, PA 19103 (215) 814-3436 (215) 814-3187	Eduardo Rovira (OSC) Huu Ngo (RPM)	OSC coordinated all site Removal activities. RPM coordinated and continue to coordinate all Remedial activities for the Site.
Doylestown Township Water Authority (DTWA) 425 Wells Road Doylestown , PA 18901	Richard Jon (Executive Director)	DTWA will own the water line and is responsible for maintaining the water line once it is constructed by U.S. EPA.
CKS Engineers, Inc. 88 South Main Street Doylestown, PA 18901 (215) 340-0600	Rich Longcoy (Engineer)	Designed the water distribution system as a consultant to the DTWA.
Weston Solutions 1400 Weston Way West Chester, PA 19382 (610) 209-1807 (EPA Contractor)	Craig Anderman (START Site Leads)	Superfund Technical Assessment and Response Team (START) representatives provided technical support to OSC, including groundwater sampling, photographic documentation, and construction oversight of water main and auxiliary facility

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Agency	Contact	Brief Description of Duties
NorthStar Federal Services, Inc. 55 Progress Place, Unit 1 Jackson, NJ 08527 (509) 545-5404 (EPA Contractor)	Charles Keegan (Response Manager)	Coordinated all site activities on behalf of emergency and rapid response services (ERRS) contractor
Passerini and Sons (a subcontractor to NorthStar) 52 Gruver Road Pipersville, PA 18947 (215) 766-0436	Adam Passerini	Responsible for constructing the water main and providing connection from main to line stop and from the line stop to the house.
Roher Mechanical Services, Inc. 610-247-6636 276 East Valley Forge Road King of Prussia, PA 19406 (a subcontractor to WRS)	Scott Roher	Constructed of the plumbing system inside the residential home.
LCF Construction (a subcontractor to NorthStar) PO Box 310 Hatfield, PA 19440 (215) 368-9373	Lester Fryling	Responsible for constructing the line stop valve that connects to the water main.
WPB Enterprises, Inc. (subcontractor to NorthStar) 2844 Slifer Valley Road Riegelsville, PA 18077 (610) 346-8004	Bill Broadhead	Responsible for constructing the active soil depressurization system in the 300-330 North Broad Street building.

IV. CHRONOLOGICAL NARRATIVE OF REMOVAL ACTIONS

A. THREAT ABATEMENT ACTIONS

This response was conducted under the authority of CERCLA. The purpose of the Removal Action is to reduce the mass of contaminants in the source area to limit the potential for VI into nearby structures, and to limit migration of contaminants to groundwater.

On March 17, 2014, Weston Solutions, Inc. (WESTON*) and the Emergency and Rapid Response Services (ERRS) contractor, WRS (Compass) now NorthStar, mobilized to the Site. A temporary fence was placed along the southern perimeter of the Site and erosion and sediment control measures were installed. NorthStar began excavation of soil adjacent to the western corner of Building A and continued excavation in a counter clockwise direction around the south side of the building. After excavating an area, NorthStar backfilled the excavated section with clean fill and compacted the disturbed areas.

During the excavation, 11 concrete underground storage tanks (USTs) were uncovered in the south section of the Site as shown in Figure 3. WESTON collected samples from the material within the USTs prior to removal. The materials within the USTs were removed and placed in various storage containers and labeled and staged pending analysis. WESTON also collected

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soil samples from areas surrounding the USTs and in the south section of the Site. These areas were excavated to approximately 12 to 14 feet below ground surface (bgs), and placed into 40-yard dumpsters or dump trucks pending analysis and shipped to appropriate off-site disposal facilities. From March through July 2014, approximately 2,440 tons of soil were excavated from areas surrounding Building A and were shipped off-site for disposal. The extent of the excavated areas is shown in Figure 3.

After excavations were complete, NorthStar backfilled, graded, and compacted the excavated areas to manage stormwater and to prepare for the area to be paved. Areas that were previously grass-covered were restored with a layer of sod along the south fenceline of Building A. A new chain-link fence was installed between the storage facility property and the Site. NorthStar planted 30 arborvitae along the chain-link fence to replace the pre-existing bushes. The parking surfaces that were removed as a result of the soil excavation were replaced.

From August 24th through September 19th, Passerini and Sons, a subcontractor to NorthStar, connected a residence located down gradient from the Site to a public water supply. Passerini and Sons extended the water main located along North West Street in Doylestown, Pennsylvania, approximately 300 feet to the northwest. A line stop and a fire hydrant were installed and a lateral water line was connected to provide water service to a residence whose water well has been impacted by the Site. Another NorthStar subcontractor, Roher Mechanical Services, Inc., installed the indoor plumbing and connected the home to the lateral line. The lawn and any disturbed soil was revegetated and restored to its original condition.

On October 12, 2015, WPB Enterprises Incorporated installed a depressurization system inside Building A located at 300 North Broad Street. Eight suction fans and associated piping were strategically installed in and around the building foundation, based on the findings of the study performed to determine how air was moving beneath the building. The fans were wired by an electrical contractor, and then the system efficiency was fine tuned to obtain negative sub-slab pressure. A Magnehelic® differential pressure gauge was installed on each of the ventilation systems to monitor the operation of the ventilation fans. On November 21, 2015 a ninth suction fan was installed at space 330 due to readings taken after the first eight suction fans were installed. During the week of March 14, 2016 a tenth fan (with one suction hole at space 324 and one at space 328) was installed after evaluating the results of the air samples collected in earlier in the year.

On August 11, 2016 the OSC stopped by the site to check the depressurization system and noticed that five of the gauges were reading zero. After contacting the installer and checking the system, it was discovered that 4 of the fans had no power. After talking to the property owner, it was discovered that one of the tenants had moved out and the electricity to that space had been disconnected; therefore, the fans had stopped working. On October 12, 2016 the property owner had his electrician rewired the fans. To eliminate the possibility of the fans losing power due to tenants moving out and the electricity disconnected, during the week of December 11, 2016 an electric "house panel" was installed by EPA's subcontractor and all the fans were rewired to that "house panel."

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**B. TREATMENT, DISPOSAL, OR ALTERNATIVE TECHNOLOGY
APPROACHES PURSUED**

All materials, various waste streams, and debris removed from the Site were disposed of in appropriate Resource Conservation and Recovery Act (RCRA)-permitted disposal or treatment facility.

C. DISPOSAL METHODS AND QUANTITIES REMOVED

Table 1 provides detailed information regarding the materials that were disposed from the Chem Fab, Inc. Site. Actual manifests can be found in the Site file storage at the EPA Region III Central File Room, Philadelphia, Pennsylvania.

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Table 1 – Disposal Methods and Quantities Removed

Waste Stream	Medium	Estimated Quantity	Manifest #
TCE Hazardous	Solid	126.43 Tons	012735789, 012735787, 012735782, 012735786, 012735783, 012735788, 012735784, 012735785, 012735791
Chrome and VOC Hazardous	Liquid	4 totes	01099076-1A, 01099076-1B, 01099076-1C, 01099076-1D
Chrome and VOC Hazardous	Solid	16 55-gallon drums 8 cubic yard boxes (9,192 pounds)	01099076-2, 01099076-3A, 01099076-3B, 01099076-3C, 01099076-3D, 01099076-3E, 01099076-3F, 01099076-3G, 01099076-3H
Chromium Hazardous	Solid	7.93 tons	007686208
Non-hazardous	Solid	2,300 Tons	Please refer to the site file, stored at EPA Region III Central File Room, Philadelphia, Pa.

Notes:

EPA = U.S. Environmental Protection Agency

TCE = trichloroethene

VOC = volatile organic compound

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**V. PUBLIC INFORMATION AND COMMUNITY RELATIONS
ACTIVITIES**

The Pollution Reports (POLREPs), site photographs, and other Administrative Record documents relating to the Site were made available to the public. They can be viewed at <https://www.epaosc.org/chemfab> or at the Administrative Record link on the sidebar of the U.S. EPA Region III Hazardous Site Cleanup Division Home page at <https://www3.epa.gov>. In addition, the Administrative Record can be examined at the following locations:

Administrative Records Room
US EPA Region III
1650 Arch Street
Philadelphia, P A 191 03

Bucks County Planning Commission
The Almshouse, Neshaminy Manor Center
1260 Almshouse Road
Doylestown, Pennsylvania 18901
(215) 345-3400
Email: bcnc@co.bucks.pa.us
AR303762

EPA issued a fact sheet summarizing the Agency's preferred remedial alternative for Operable Unit 1 (OU1) of the Site to residences and businesses near the Site in June 2012. EPA held a 30-day comment period from June 25 to July 25, 2012 to accept public comments on the remedial alternatives presented in the FFS, the Proposed Remedial Action Plan (PRAP), and the other documents contained within the Administrative Record for OUI of the Site. On July 10, 2012, EPA held a public meeting to discuss the PRAP and accept comments. A transcript of this meeting is included in the OUI Administrative Record. The summary of significant comments received during the public comment period and EPA's responses are included in the Responsiveness Summary, which is a part of the Record of Decision.

VI. RESOURCES COMMITTED

This section explains the initial and additional funding requests and presents an estimated total cost summary. Appendix B provides a copy of the funding request documents.

A. INITIAL FUNDING REQUEST

On November 8, 2012, using authority provided under EPA Delegation 14-2, the OSC authorized the expenditure of funds in an amount not to exceed \$50,000 to initiate a removal action intended to reduce concentrations of VOCs in the indoor air of the suites inside building A located at 300-360 North Broad Street. To accomplish this, the OSC installed portable air purifiers into selected suites within the impacted building. The OSC subsequently collected additional data to evaluate the efficiency of the units combined with the existing building vapor mitigation system in reducing VOCs concentrations within the building.

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B. ADDITIONAL FUNDING REQUEST

In January 2012, the Remedial Program completed a Focused Feasibility Study intended to evaluate alternatives to address threats presented by soils located at the Site. In December 2012, the Remedial Program issued a Record of Decision (ROD) selecting remedial action consisting of, among other things, the removal and off-site disposal of certain contaminated soils at the Site outside the footprint of the three buildings.

Based on the data collected (see Section III of the Original Action Memo), potential future conditions at the Site, the extent of contamination and other reasons (e.g., lack of Remedial and State funding to do the work), the OSC determined that continued Removal Action was necessary to mitigate or prevent a threat to public health and that a change of scope, additional funding, and an exemption to the 12-month limit were required to perform such action.

On September 19, 2013, EPA issued an Action Memorandum approving a scope change, the expenditure of additional funds, and an exemption to the statutory funding and time limits on the Removal Action. The selected Removal Action consisted primarily of the excavation and off-site disposal of certain contaminated soils presently located at the Site.

On May 28, 2014, a Change of Scope was approved to address the threat to public health from groundwater impacted by the contaminated soils on the Site. Hazardous substances in soils at the Site have been determined to be responsible for groundwater contamination that has impacted two residential water wells down gradient from the Site. Under this Change of Scope, bottled water was provided to one residence where such impacts are significant.

On January 20, 2015, EPA issued an Action Memorandum approving a scope change on the Removal Action ("Action Memo III"). This change of scope was to install a permanent connection to the affected residence to the Doylestown Township Municipal Authority water supply.

On September 30, 2015, a Change of Scope was approved to install a permanent depressurization system to reduce indoor TCE levels in Building A to levels that pose no unacceptable risk to the tenant's and their patrons.

C. ESTIMATED TOTAL COST SUMMARY

1. Extramural Costs (contractors)

Weston Solutions, Inc. (START)	\$ 307,560
NorthStar (ERRS – including subcontracting)	\$ 821,988

VII. EFFECTIVENESS OF REMOVAL ACTIONS

This section describes the activities of the various agencies, provides an analytical synopsis, and discusses disposal method used and quantities removed for the removal activity.

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A. ACTIONS TAKEN BY POTENTIALLY RESPONSIBLE PARTIES

The Potentially Responsible Party for this Site was identified as Chem-Fab, Inc. Initial actions taken by Manfred DeRewel, Sr. and/or Fred DeRewel, Jr., representing Chem-Fab, Inc., included hiring a contractor to sample drums for future disposal. No further actions were conducted by the PRP, and no information regarding the chemicals stored at the Site was provided by the PRP. No other PRPs were identified.

B. ACTIONS TAKEN BY FEDERAL AGENCIES

The U.S. EPA Region III Superfund Removal Branch directed the management of this project. Eduardo Rovira, the OSC, directed all removal actions. OSC Eduardo directed the daily activities of WESTON and NorthStar. In addition, the OSC closely coordinated with other U.S. EPA personnel, Doylestown Township, local officials, and residents.

C. ACTIONS TAKEN BY STATE AND LOCAL AGENCIES

Doylestown Township and the Doylestown Township Municipal Authority (DTMA) assisted OSC Rovira with the construction of the water main in accordance with specifications set forth by DTMA.

D. ACTIONS TAKEN BY CONTRACTORS

WESTON provided technical support to the OSC under the START contract during removal activities. WESTON responsibilities included groundwater, indoor air, and soil sampling; comparing sampling results with state and EPA standards; preparing a trip report; overseeing removal activities and the construction of the water main; and documenting site activities through photographs and written notes.

NorthStar served as the main construction contractor under the EPA Region III ERRS contract. NorthStar responsibilities included removal activities, overseeing construction of water main by Passerini and Sons and construction of the residential plumbing by Roher Mechanical Services. Both contractors, Passerini and Sons and Roher Mechanical Services, acted as NorthStar subcontractors. NorthStar was also responsible for coordinating and scheduling site activities with respective residents, the community, and the Township of Doylestown.

VIII. DIFFICULTIES

Although site work was temporarily hindered due to minor set-backs, no significant problems were encountered throughout the course of this removal effort.

A. ITEMS THAT AFFECTED THE REMOVAL ACTION

During the soil excavation behind Building A, there was a lack of sufficient space to effectively move equipment, excavate, and stage contaminated soil. ERRS overcame this situation by excavating areas and backfilling the same areas with clean fill during the same day.

**Federal On-Scene Coordinator's After Action Report
Chem-Fab Removal Site**

IX. GLOSSARY OF ABBREVIATIONS AND DEFINITIONS

bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
Cr ⁶⁺	Hexavalent Chromium
COC	contaminant of concern
DTMA	Doylestown Township Municipal Authority
EPA	U.S. Environmental Protection Agency
ERRS	Emergency and Rapid Response Service
FFS	Focused Feasibility Study
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
OSC	On-Scene Coordinator
OUI	Operable Unit 1
PADEP	Pennsylvania Department of Environmental Protection
PCE	Tetrachloroethylene
POLREP	Pollution Report
PRAP	Proposed Remedial Action Plan
PRP	Potentially Responsible Party
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act of 1986
START	Superfund Technical Assessment and Response Team
TCE	Trichloroethene
U.S. EPA	U. S. Environmental Protection Agency
UST	underground storage tank

**Federal On-Scene Coordinator's After Action Report
Chem-Fab Removal Site**

VOC volatile organic compound
WESTON® Weston Solutions, Inc.
WRS WRS – now NorthStar (ERRS contractor)

**Federal On-Scene Coordinator's After Action Report
Chem-Fab Removal Site**






APPENDICES

**Federal On-Scene Coordinator's After Action Report
Chem-Fab Removal Site**

**APPENDIX A
FIGURES**



Legend

-  Doylestown Borough wastewater treatment facility
-  Former Chem-Fab facility
-  Storage facility
-  Approximate site boundary
-  Stream

Data Sources:
Imagery - ESRI World Imagery webservice

Coordinate System:
Projection: UTM NAD83 Zone 18, feet
Datum: WGS 1984







Chem-Fab Removal
Doylestown, Bucks County, Pennsylvania

Figure 1
Site Layout Map

Date: 9/14/2016





<p>Legend</p> <p> Former Chem-Fab facility</p> <p> Storage facility</p> <p>Building A: Business complex</p> <p>Building B: Residential and commercial use</p> <p>Building C: Converted three-story home used for residential and commercial purposes</p>	<p>Data Sources: Imagery - ESRI World Imagery webservice</p> <p>Coordinate System: Projection: UTM NAD83 Zone 18, feet Datum: WGS 1984</p> <p> 0 1 in = 50 ft 50 Feet</p>	<p>Chem-Fab Removal Doylestown, Bucks County, Pennsylvania</p> <p>Figure 2 Building Identification Map</p> <p>Date: 9/14/2016</p> 
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**Federal On-Scene Coordinator's After Action Report
Chem-Fab Removal Site**

**APPENDIX B
FUNDING REQUEST DOCUMENTS**

SPECIAL BULLETIN A

**Chem-Fab NPL Site
Doylestown, Pennsylvania – Bucks County**

November 8, 2012

ATTN: Ronald J. Borsellino, Director
Hazardous Site Clean-up Division (3HS00)

THRU: Dennis P. Carney, Associate Director
Preparedness and Response Office (3HS30)

THRU: Gerald T. Heston, Chief
Eastern Response Branch (3HS31)

FROM: Eduardo Rovira, Jr., OSC
Eastern Response Branch (3HS31)

ER 11/8/12

I. Issue

Groundwater underlying the Chem-Fab facility and adjacent properties is contaminated with Trichloroethylene (TCE). TCE is a colorless liquid which is used as a solvent for cleaning metal parts. Drinking or breathing high levels of trichloroethylene may cause nervous system effects, liver and lung damage, abnormal heartbeat, coma, and possibly death.

Sub-slab data from sampling events (October 2011 and January 2012) showed the presence of VOCs (mainly TCE) at high concentrations underneath two commercial office buildings (Building A and C, as described herein) at the Site. Indoor air data (October 2011, January and August 2012) showed concentrations of VOC at levels of concern in one of the buildings (Building A).

The release meets the criteria for conducting a removal action under Section 300.415 of the NCP. The OSC has determined that immediate funds are needed to mitigate the threat posed to human health and the environment. The OSC has authorized a ceiling for the removal action of \$50,000, in accordance with EPA Delegation 14-2.

This Special Bulletin documents the scope of work needed to complete the removal action to protect public health and the environment.

II. Background

A. Site Description

The Chem-Fab Site is located at and around 300-360 North Broad Street in

Doylestown, Montgomery County, Pennsylvania. The Site includes 300-360 North Broad Street (the "Property") upon which industrial and disposal operations occurred in the past as well as other properties on which and to which contamination from such operations has migrated or otherwise come to be located. The Property currently contains a small office park hosting several commercial tenants in 3 separate buildings:

Building A: 300 – 330 North Broad Street (7 business tenants)
Building B: 340 North Broad Street (1 business tenant)
Building C: 350 – 360 North Broad Street (3 business tenants)

B. Site Background

From the mid-1960s to the early 1990s, Chem-Fab, Inc. (Chem-Fab) operated an electroplating and metal etching facility on the Property. Chem-Fab's operations generated wastes that included metals; volatile organic compounds (VOC) such as 1,1,1-trichloroethane ("1,1,1-TCA"), methylene chloride, and trichloroethylene ("TCE"); ferric chloride; mineral spirits; chromic acid rinse water and sludge; chromic acid; sulfuric acid; sodium bisulfate; and sodium hydroxide.

In the late 1970s, Chem-Fab was acquired by Boarhead Corporation, a business established by Manfred DeRewal, Sr. DeRewal also owned DeRewal Chemical Company Inc. (DCC), which removed, transported, and disposed of chemical waste generated by other companies. During the 1970s, liquid wastes, including hundreds of thousands of gallons of ammonia, hydrochloric acid, and pickle liquor waste, were transported from various industrial entities to the Property for disposal. In addition to Chem-Fab, two other entities associated with DeRewal – a gallium reclamation business and a computer assembly outfit – operated at the Property during the 1980s and 1990s, respectively. Chem-Fab owned the property through approximately May 1999.

In August 1987, EPA performed a Preliminary Assessment and Site Inspection (PA/SI) at the Doylestown Groundwater Site and the Chem-Fab Site. During the PA/SI, water samples from residential wells and the municipal well located in the vicinity of the Chem-Fab Site were found to contain elevated levels of VOC including TCE and tetrachloroethylene (PCE). In October 1987, EPA conducted a removal action which included the delivery of bottled water and carbon filtration units to affected residences and connection of affected residences to public water supplies.

In September 1994, EPA conducted a removal assessment at the Property. EPA found improperly and incompatibly stored drums of hazardous material, including flammable liquids and acids. Samples from these drums indicated the presence of acids, TCE, and chromium. A drum of radioactive thorium nitrate and containers of ammonia were also discovered. EPA also found a 50-foot underground storage tank (UST) which contained approximately 6,000 gallons of liquid and sludge and appeared to be leaking. Samples from the UST were found to contain hexavalent

chromium. Samples taken from a sump located inside the warehouse indicated the presence of TCE.

In 1994-1995, EPA conducted a second removal action at the Chem-Fab Site. During that response, EPA removed 117 drums and 8,400 gallons of liquid wastes, including chromium-contaminated wastes from the UST as well as other solid wastes and fuel oils.

In 1998, PADEP assumed the lead role in further assessing the Chem-Fab Site. Beginning in 1999, PADEP began an investigation of the soils and groundwater in the vicinity of the Site. PADEP found hexavalent chromium (Cr[VI]) and VOCs in the soils and in the groundwater on the Property and on an adjacent property. Visible chromium contamination was observed in the drainage ditch on the adjacent property. In 2004, PADEP issued a Statement of Decision selecting a groundwater remedy for the Site. However implementation of the remedy was delayed due to technical issues and lack of funding. PADEP continued its investigation and requested that EPA list the Site on the CERCLA National Priorities List (NPL).

EPA proposed the Chem- Fab Site for the NPL in September 2007. The Site was formally added to the NPL in March 2008. In September 2009, EPA initiated a fund-lead Remedial Investigation and Feasibility Study to comprehensively characterize the nature and extent of contamination at the Chem-Fab Site and to evaluate alternatives for addressing threats to human health and the environment presented by such contamination. EPA also conducted vapor intrusion (VI) sampling in the homes of residents living down-gradient from the Site, and conducted VI sampling in the commercial spaces at the Property.

C. Types of Substances Present

Sub-slab data showed the presence of VOC (mainly TCE) at high concentrations under Building A and Building C. Indoor air data showed concentrations of VOC at levels of concern at Building A, including the results of the August 2012 sampling event, which was conducted after the property owner turned on a vapor mitigation system. The data was provided to an EPA toxicologist for review. The EPA toxicologist calculated carcinogenic risks (CR) and non-carcinogenic hazard quotients (HQ) for each individual commercial space at the Property where sampling occurred. For several spaces within Building A the indoor air data showed an HQ at or exceeding 3 and/or a CR exceeding 1×10^{-4} based on at least one of the two data points. HQ and CR calculations for the sub-slab data points show similar risks for exposure to vapors detected below the building, which vapors could enter the building in the future.

On July 18, 2012, the Property owner turned on an existing vapor mitigation system. Three weeks after the system was turned on (August 8, 2012) EPA took

indoor air samples and found that VOC levels had not been significantly reduced in Building A, leased spaces 320, 324, 328 and 330.

Trichloroethylene (TCE) is a nonflammable, colorless liquid with a somewhat sweet odor and a sweet burning taste. It is used mainly as a solvent to remove grease from metal parts, but it is also an ingredient in adhesives, paint removers, typewriter correction fluids, and spot removers.

TCE is not thought to occur naturally in the environment. However, it has been found in underground water sources and many surface waters as a result of the manufacture, use, and disposal of the chemical.

When TCE enters the environment:

1. It dissolves a little in water, but it can remain in ground water for a long time.
2. It quickly evaporates from surface water, so it is commonly found as a vapor in the air.
3. It evaporates less easily from the soil than from surface water. It may stick to particles and remain for a long time.
4. It may stick to particles in water, which will cause it to eventually settle to the bottom sediment.
5. It does not build up significantly in plants and animals.

D. National Priorities List

EPA proposed the Chem-Fab Site for the NPL in September 2007. The Site was formally added to the NPL in March 2008.

E. State and Local Authorities Roles

The Commonwealth of Pennsylvania referred the Site to EPA because it had exhausted all of its funding resources to remediate the Site and the TCE ground water plume.

EPA continues to coordinate efforts with PADEP, and other Federal, State and local authorities regarding developments at the Site.

III. Threats to Public Health or Welfare or the Environment

Section 300.415 (b) (2) of the NCP, 40 C.F.R. § 300.415 (b) (2), identifies factors to be considered in determining the appropriateness of a removal action. Paragraphs (i),(iv) and (vii) of that section directly apply as follows to the conditions at the Chem-Fab Site:

- *300.415(b)(2)(i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.*

VOCs, including TCE, have been released into groundwater at and near the Property. These VOCs have migrated from groundwater into indoor air at the Property. Sampling results showed concentrations of VOC (mainly TCE) in indoor air at levels of concern in Building A.

Breathing high levels of trichloroethylene may cause nervous system effects, liver and lung damage, abnormal heartbeat, coma, and possibly death.

- 300.415(b)(2)(iv) *High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.*

VOCs, including TCE, have been released into groundwater at and near the Property. VOC vapor has migrated from groundwater into spaces beneath the foundation of buildings at the Property. Sampling results showed concentrations of VOC vapor at high concentrations underneath Buildings A and C. VOCs are migrating from beneath Building A into the air inside the building. VOCs are not presently migrating from beneath Building C into the air inside the building.

- 300.415(b)(2)(vii) *The availability of other appropriate federal or state response mechanisms to respond to the release.*

PADEP has requested EPA assistance to provide technical expertise and financial resources in assessing and responding to the situation.

IV. Proposed Actions and Estimated Costs

A. Actions

1. Install and operate air purifiers (with carbon filters) in Building A, leased spaces 320, 324, 328 and 330.
2. Obtain additional air samples (indoor and sub-slab) from Building A in January 2013.
3. Continue to evaluate the existing mitigation system and the need for and scope of additional actions, as necessary, to minimize or prevent further migration of VOCs into the tenant spaces at the property.

B. Estimated Costs

	Ceiling
ERRS	\$25,000
START	\$15,000
<u>Unallocated</u>	<u>\$10,000</u>
TOTAL	\$50,000

C. Contribution to Remedial Performance

The proposed actions stated in Section IV above are appropriate and consistent with the anticipated Remedial Actions that may be taken at the Site.

D. Compliance with ARARS

The removal action will comply with all Applicable or Relevant and Appropriate Requirements (ARARS), to the extent practicable, considering the exigencies of the situation.

V. Expected Change in the Situation should No Action be Taken or Action Delayed

If no action is taken, or delayed, tenants of Building A will continue to be exposed to TCE at levels of concern.

VI. Outstanding Policy Issues

No outstanding policy issues.

VII. Enforcement

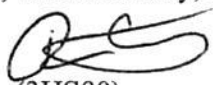
The OSC will coordinate with the Office of Enforcement regarding the possibility of enforcement-lead activities at the Site.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SEP 19 2013

SUBJECT: Approval of a request for approval of Additional Funds for a Removal Action, Approval for a \$2 Million Exemption Request and Scope Change at the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania.

FROM: David P. Wright, Director 
Hazardous Site Cleanup Division (3HS00)

TO: Mathy Stanislaus, Assistant Administrator
Office of Solid Waste and Emergency Response (5101T)

THRU: Lawrence Stanton, Director
Office of Emergency Management (5104 A)

ATTN: Gilberto Irizarry, Director
Program Operations and Coordination Division (5104 A)

ISSUE

The attached Memorandum is a "Request for Additional Funds for a Removal Action, Approval for a \$2 Million Exemption Request and Scope Change ("Action Memo")" which documents the need for funding and approval to conduct and continue Removal Action to prevent or mitigate the threat posed by the release or substantial threat of release of hazardous substances, pollutants or contaminants at the Chem-Fab Site (the "Site") located in Doylestown Borough, Bucks County, Pennsylvania.

The action proposes to address the threat to public health from certain contaminated soils on property within the Site and which is located at 300 – 360 North Broad Street ("Property"). Hazardous substances in soils at the Property have been determined to be responsible for contaminant vapor intrusion ("VI") into a commercial building on the Property and groundwater contamination that has impacted a public supply well down gradient from the Property. The purpose of the Removal Action is to reduce the mass of contaminants in the source area to limit the potential for VI into additional nearby commercial structures, and limit migration of contaminants to groundwater (thereby limiting the impact on the public supply wells). To accomplish these goals, this Action Memo proposes to excavate and transport certain soils on the Property outside the footprint of the buildings at the Property for disposal at an off-site disposal location.

The Site is on the NPL and is currently the subject of an ongoing Remedial Investigation by the Remedial Program. In January 2012, the On-Scene Coordinator (“OSC”) commenced a Removal Site evaluation pursuant to Section 300.410 of the National Contingency Plan (“NCP”) which specifically focused on vapor intrusion into the commercial buildings on the Property. The data revealed the presence of VOCs (mainly TCE) at high concentrations in soils underneath two of the three commercial buildings at the Property, as well as high concentrations of VOCs at levels of concern in suites in one of the buildings.

On November 8, 2012, using authority provided under EPA Delegation 14-2, the OSC authorized the expenditure of CERCLA funding in an amount not to exceed \$50,000 to initiate a Removal Action intended to reduce VOCs levels in the suites inside the impacted building. To accomplish this, the OSC installed portable air purifiers into selected suites within the impacted building. The OSC subsequently collected additional data to evaluate the efficacy of such units combined with the existing building vapor mitigation system in reducing VOCs levels within the building.

In January 2012 the Remedial Program completed a Focused Feasibility Study intended to evaluate alternatives to address threats presented by soils located at the Property. In December 2012, the Remedial Program issued a Record of Decision selecting remedial action consisting of, among other things, the removal and off-site disposal of certain contaminated soils on the Property outside the footprint of the three commercial buildings on the Property. EPA Remedial funding to commence this action has not been secured and may not be secured in the near term.

The proposed Removal Action consists of excavation and off-site disposal of certain soils outside of the footprint of the buildings at the property. As discussed below, the proposed Removal Action meets the criteria for the “consistency” exemption to the \$2 million statutory limit for Removal Actions pursuant to Section 104(c)(1)(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), 42 U.S.C. § 9604(c)(1)(C).

I approved additional CERCLA funding in the amount of \$2,688,000 as requested above the \$50,000 already authorized by the OSC pursuant to Delegation of Authority 14-2. This funding will establish an estimated Removal Project Ceiling of \$2,738,000, of which \$2,100,000 is from the Regional Allowance. The funding is necessary to mitigate the threats identified in this Action Memo.

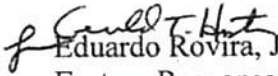
Attachment: Action Memo



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SEP 19 2013

SUBJECT: Request for Additional Funds for a Removal Action, Approval for a \$2 Million Exemption Request and Scope Change at the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania.

FROM:  Eduardo Rovira, Jr., On-Scene Coordinator
Eastern Response Branch (3HS31)

TO: David P. Wright, Acting Director
Office of Preparedness and Response (3HS30)

I. PURPOSE

The purpose of this "Request for Additional Funds for a Removal Action, Approval for a \$2 Million Exemption Request and Scope Change ("Action Memo") is to document the need for funding and approval to conduct and continue Removal Action to prevent or mitigate the threat posed by the release or substantial threat of release of hazardous substances, pollutants or contaminants at the Chem-Fab Site (the "Site") located in Doylestown Borough, Bucks County, Pennsylvania.

This action is proposed to address the threat to public health from certain contaminated soils on property within the Site and which is located at 300 – 360 North Broad Street ("Property"). Hazardous substances in soils at the Property have been determined to be responsible for contaminant vapor intrusion ("VI") into a commercial building on the Property and groundwater contamination that has impacted a public supply well down gradient from the Property. The purpose of the Removal Action is to reduce the mass of contaminants in the source area to limit the potential for VI into additional nearby commercial structures, and limit migration of contaminants to groundwater (thereby limiting the impact on the public supply wells). To accomplish these goals, this Action Memo proposes to excavate and transport certain soils on the Property outside the footprint of the buildings at the Property for disposal at an off-site disposal location.

The Site is on the NPL and is currently the subject of an ongoing Remedial Investigation by the Remedial Program. In January 2012, the On-Scene Coordinator ("OSC") commenced a Removal Site evaluation pursuant to Section 300.410 of the National Contingency Plan ("NCP") which specifically focused on vapor intrusion into the commercial buildings on the Property. The data revealed the presence of VOCs (mainly TCE) at high concentrations in soils underneath two of the three commercial buildings at the Property, as well as high concentrations of VOCs at levels of concern in suites in one of the buildings.

On November 8, 2012, using authority provided under EPA Delegation 14-2, the OSC authorized the expenditure of CERCLA funding in an amount not to exceed \$50,000 to initiate a Removal Action intended to reduce VOCs levels in the suites inside the impacted building. To accomplish this, the OSC installed portable air purifiers into selected suites within the impacted building. The OSC subsequently collected additional data to evaluate the efficacy of such units combined with the existing building vapor mitigation system in reducing VOCs levels within the building.

In January 2012 the Remedial Program completed a Focused Feasibility Study intended to evaluate alternatives to address threats presented by soils located at the Property. In December 2012, the Remedial Program issued a Record of Decision selecting remedial action consisting of, among other things, the removal and off-site disposal of certain contaminated soils on the Property outside the footprint of the three commercial buildings on the Property. EPA Remedial funding to commence this action has not been secured and may not be secured in the near term.

Based on the data collected (see Section III), potential future conditions at the Site, the extent of contamination and other reasons (e.g., lack of Remedial and State funding to do the work), the OSC determines that continued Removal Action is necessary to mitigate or prevent a threat to public health and that a change of scope, additional funding, and an exemption to the 12-month limit are required to perform such action.

The proposed Removal Action consists of excavation and off-site disposal of certain soils outside of the footprint of the buildings at the property. As discussed below, the proposed Removal Action meets the criteria for the "consistency" exemption to the \$2 million statutory limit for Removal Actions pursuant to Section 104(c)(1)(c) of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 9604(c)(1)(C).

Additional CERCLA funding in the amount of \$2,688,000 is requested above the \$50,000 already authorized by the OSC pursuant to Delegation of Authority 14-2. This funding will establish an estimated Removal Project Ceiling of \$2,738,000, of which \$2,100,000 is from the Regional Allowance. The funding is necessary to mitigate the threats identified in this Action Memo.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Physical Location/Site Characteristics

The Chem-Fab Site is located at and around 300 – 360 North Broad Street in Doylestown, Montgomery County, Pennsylvania. The Site is located approximately 0.6 miles from the center of Doylestown and is surrounded by a mixture of commercial, industrial and residential areas. The closest school is

approximately 0.5 miles to the southwest. The Site includes 300 – 360 North Broad Street (the “Property”), upon which industrial and disposal operations occurred in the past, as well as other properties on which and to which contamination from such operations has migrated or otherwise come to be located. The Property currently contains a small office park hosting several commercial tenants in 3 separate buildings identified on Attachment A as follows:

Building A: 300 – 330 North Broad Street
Building B: 340 North Broad Street
Building C: 350 – 360 North Broad Street

The areal extent of the Chem-Fab Site will be further delineated in the ongoing Remedial Investigation.

2. Site Background

From the mid-1960s to the early 1990s, Chem-Fab, Inc. (“Chem-Fab”) operated an electroplating and metal etching facility on the Property. Chem-Fab’s operations generated wastes that included metals, volatile organic compounds (VOCs) such as 1,1,1-trichloroethane (“1,1,1-TCA”), methylene chloride, trichloroethylene (“TCE”), ferric chloride, mineral spirits, chromic acid rinse water and sludge, chromic acid, sulfuric acid, sodium bisulfate, and sodium hydroxide.

In the late 1970s, Chem-Fab was acquired by Boarhead Corporation, a business established by Manfred DeRewal, Sr. DeRewal also owned DeRewal Chemical Company Inc. (“DCC”), which removed, transported, and disposed of chemical waste generated by other companies. During the 1970s, liquid wastes, including hundreds of thousands of gallons of ammonia, hydrochloric acid, and pickle liquor waste, were reportedly transported from various industrial entities to the Property for disposal. In addition to Chem-Fab, two other entities associated with DeRewal (a gallium reclamation business and a computer assembly outfit) operated at the Property during the 1980s and 1990s, respectively. Chem-Fab owned the property through approximately May 1999.

In August 1987, EPA performed a Preliminary Assessment and Site Inspection (PA/SI) at the Doylestown Groundwater Site and the Chem-Fab Site. During the PA/SI, water samples from residential wells and the municipal well located in the vicinity of the Chem-Fab Site were found to contain elevated levels of VOCs including TCE and tetrachloroethylene (“PCE”). In October 1987, EPA conducted a Removal Action which included the delivery of bottled water and carbon filtration units to affected residences and connection of affected residences to public water supplies.

In September 1994, EPA conducted a Removal Assessment at the Property. EPA found improperly and incompatibly stored drums of hazardous material, including flammable liquids and acids. Samples from these drums indicated the presence of acids, TCE, and chromium. A drum of radioactive thorium nitrate and containers of ammonia were also discovered. EPA also found a 50-foot underground storage tank (UST) which contained approximately 6,000 gallons of liquid and sludge, which appeared to be leaking. Samples from the UST were found to contain hexavalent chromium. Samples taken from a sump located inside the warehouse indicated the presence of TCE.

In 1994 – 1995, EPA conducted a second Removal Action at the Chem-Fab Site. During that response, EPA removed 117 drums and 8,400 gallons of liquid wastes, including chromium-contaminated wastes from the UST as well as other solid wastes and fuel oils.

In 1998, PADEP assumed the lead role in further assessing the Chem-Fab Site. Beginning in 1999, PADEP began an investigation of the soils and groundwater in the vicinity of the Site. PADEP found hexavalent chromium (Cr[VI]) and VOCs in the soils and in the groundwater on the Property and on an adjacent property. Visible chromium contamination was observed in the drainage ditch on the adjacent property. In 2004, PADEP issued a Statement of Decision selecting a groundwater remedy for the Site. However implementation of the remedy was delayed due to technical issues and lack of funding. PADEP continued its investigation and requested that EPA list the Site on the NPL.

In September 2009, EPA commenced a Remedial Investigation at the Site, which is still ongoing. Concurrently with that study, EPA conducted VI sampling in the homes of residents living down gradient from the Site and conducted VI sampling in the commercial spaces at the Property in October 2011, January 2012, August 2012 and January 2013.

In January 2012, the Remedial Program completed a Focused Feasibility Study intended to identify alternatives to address threats to human health presented by certain contaminated soils at the Property. In December 2012, the Remedial Program issued a Record of Decision selecting remedial action consisting of, among other things, excavation and off-site disposal of certain soils at the Property outside the footprint of the buildings at the Property.

3. Quantities and Types of Substances Present

Contaminants in the soil and groundwater at the Site appear to be related to historical operations and disposal that occurred at the Property. Soil at the Property has been found to be contaminated with a number of inorganics, VOCs and semi-volatile organic compounds (“SVOCs”). The contaminants with the most significant levels include hexavalent chromium (“Cr[VI]”), PCE, and TCE.

Cr[VI], PCE, and TCE were found at concentrations up to 781 mg/kg, 190 mg/kg, and 4,000 mg/kg, respectively. The area of highest soil contamination roughly corresponds to the area where an above-ground tank farm was previously located. The former Chem-Fab facility had up to six above-ground storage tanks as well as a 10,000 gallon underground storage tank. Drums of waste were also found in this area during the 1994 EPA removal action. EPA found label information on drums and other containers indicating the presence of xylene, toluene, hydrochloric acid, sulfuric acid, nitric acid, caustic soda, methyl isobutyl ketone, polymeric isocyanate, benzenesulfonic acid, nickel rinse waste, methylene chloride, ferric chloride, chromate waste acid, and anhydrous ammonia.

Groundwater at the Site contains many of the constituents found in soil at the Property including, Cr[VI], PCE, TCE, and chemicals associated with the degradation of PCE and TCE, among other contaminants. The presence of the same contamination in the groundwater as the soil suggests that the two are linked and that the groundwater contamination is likely a result of infiltration of soil contamination into the water table below. The groundwater contamination extends from the Property in a southwest direction beneath the adjacent self-storage facility and into neighboring properties in Doylestown Township. The groundwater contamination also flows slightly westward in the direction of Cooks Run, a tributary of the Neshaminy Creek. Site-related contamination has appeared in Doylestown Municipal Water Authority Well ("MWA") #13, located less than a quarter mile southwest of the Property and in Doylestown MWA #8 which is located approximately a half mile to the southwest of the Property. Doylestown MWA #13 was shut down in 2001 to help prevent further spread of the contamination. Doylestown MWA #8 has shown levels of contamination and continues to be monitored.

VOCs, including PCE, TCE and their breakdown products have been detected in sub-slab samples taken below two of the three commercial buildings at the Property and in indoor air samples taken in one of the buildings. In vapor intrusion samples collected in October 2011, TCE was detected as high as 12,600 ppbv in the sub-slab and 41.2 ppbv in the indoor air.

Sub-slab data showed high concentrations of VOCs (mainly TCE) under Building A and Building C. Indoor air data showed concentrations of VOCs at levels of concern in Building A, including the results of the August 2012 sampling event, which was conducted after the property owner turned on an existing vapor mitigation system. An EPA toxicologist reviewed the data and calculated carcinogenic risks (CR) and non-carcinogenic hazard quotients (HQ) for each individual commercial space at the Property where sampling occurred. For several spaces within Building A, the indoor air data showed an HQ at or exceeding 3 and/or a CR exceeding 1×10^{-4} based on at least one of the two data points. HQ and CR calculations for the sub-slab data points show similar risks for

exposure to vapors detected below the building, which vapors could enter the building in the future.

TCE is a nonflammable, colorless liquid with a somewhat sweet odor and a sweet burning taste. It is used mainly as a solvent to remove grease from metal parts, but it is also an ingredient in adhesives, paint removers, typewriter correction fluids, and spot removers. TCE is not thought to occur naturally in the environment. However, it has been found in underground water sources and many surface waters as a result of the manufacture, use, and disposal of the chemical.

When TCE enters the environment:

1. It dissolves a little in water, but it can remain in ground water for a long time.
2. It quickly evaporates from surface water, so it is commonly found as a vapor in the air.
3. It evaporates less easily from the soil than from surface water. It may stick to particles and remain for a long time.
4. It may stick to particles in water, which will cause it to eventually settle to the bottom sediment.
5. It does not build up significantly in plants and animals.

3. National Priorities List

EPA proposed the Chem-Fab Site for the NPL in September 2007. The Site was formally added to the NPL in March 2008.

In September 2009, EPA initiated a fund-lead Remedial Investigation and Feasibility Study to comprehensively characterize the nature and extent of contamination at the Chem-Fab Site and to evaluate alternatives for addressing threats to human health and the environment presented by such contamination. In January 2012, EPA completed a Focused Feasibility Study intended to identify alternatives for addressing threats presented by contamination outside the footprint of the buildings at the Property. In December 2012, EPA selected remedial action that included, among other things, excavation and off-site disposal of much of this soil.

4. State and Local Authorities' Roles

EPA continues to coordinate efforts with PADEP, and other federal, state and local authorities regarding developments at the Site. State resources are not currently available to fund the response action.

B. Actions to Date

1. Previous Actions

In addition to the actions mentioned in Section II.A.2 above, the Removal Program conducted the following actions:

- a. October 2011 and January 2012: sub-slab and indoor air sampling in all three buildings on the Property. Results showed unacceptable levels of VOCs in the indoor air of Building A and high levels of VOCs under Buildings A and C.
- b. Requested the property owner to turn on an existing vapor mitigation system along the back of Building A. The system was turned on in July 2012.
- c. August 2012: indoor air sampling in Building A. Results showed unacceptable levels of VOCs in the indoor air of half of Building A (320 North Broad Street side), even after the Property owner turned on the existing vapor mitigation system. Installed portable air units in the 320 North Broad Street side of Building A.
- d. January 2013: sub-slab and indoor air sampling in Building A. Results showed acceptable levels of VOCs in the indoor air of Building A and still high levels of VOCs under Building A.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Section 300.415 of the NCP lists the factors to be considered in determining the appropriateness of a Removal Action. At this time, the following sections apply:

§ 300.415 (b)(2)(i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.

Results from the October 2011, January 2012 and August 2012 showed unacceptable VOCs levels in the indoor air of Building A and high levels of VOCs in the sub-slab of two out of the three buildings on the Property.

While the combined effect of the existing vapor mitigation system and the air purifiers currently reduces the VOCs levels vapors to acceptable levels within Building A on the Property, the air purifiers are a temporary measure and the mitigation system alone, as currently configured, is incapable of such reduction. In addition, changes in soil gas migration pathways, normal deterioration of the building(s) over time, changes in interior layout, and the reduced efficacy of the temporary units may collectively, over time, lead to unacceptable exposures to VOCs within the commercial building on the Property.

§ 300.415 (b)(2)(ii) Actual or potential contamination of drinking water supplies or sensitive ecosystems.

The drinking water supply for Doylestown has been contaminated by chemicals leaching from the soil (from the Site) to groundwater. Fluctuations in the water table have allowed contamination in the subsurface soils to migrate to groundwater. The removal of portions of the asphalt cover (parking area) by the Property owner has the potential to allow greater infiltration into the soil and thus increase the mobilization of contaminants and migration of contamination into the groundwater.

§ 300.415(b)(2)(iii) Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.

Historical information about the Site indicates that a 1,000 gallon underground catch basin may still exist at the rear of the Property. This area contains the highest levels of soil contamination at the Site. The Property owner has indicated that this catch basin has been compromised and may pose a threat of release. Fluctuations in the water table have allowed subsurface soil contamination to migrate to groundwater. The removal of portions of the asphalt surface will allow greater infiltration of precipitation and has the potential to release additional contamination from this catch basin to the groundwater.

§ 300.415(b)(2)(iv) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.

High levels of contamination have been found at the Property as shallow as 1 – 2 feet below ground surface. The removal of portions of the asphalt surface has increased the potential for these contaminants to migrate downward into the groundwater as a result of precipitation and laterally as a result of wind or other weather events.

VOCs, including TCE, have been released into groundwater at and near the Property. VOC vapor has migrated from groundwater into spaces beneath the foundation of buildings at the Property. Sampling results showed concentrations of VOCs vapor at high concentrations underneath Buildings A and C. VOCs are migrating from beneath Building A into the air inside the building. VOCs are not presently migrating from beneath Building C into the air inside the building.

§ 300.415(b)(2)(v) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

Heavy rainfall and/or wind may mobilize soil contamination in the areas where the asphalt surface has been removed and increase the potential that workers and the public are exposed to contaminants via direct contact. In addition, heavy rainfall would also raise the water table and facilitate migration that way.

§ 300.415 (b)(2)(vii) The availability of other appropriate federal or state response mechanisms to respond to the release.

PADEP does not currently have the resources to undertake response actions at the Site and has requested that EPA take the lead on mitigating the threats present onsite. Although the Site is on the NPL and a Remedial Action that would abate the threats identified herein has been selected by EPA, the Remedial Program is not in a position to implement the Remedial Action in a timely manner. There are no other federal or state response mechanisms currently available to expeditiously perform the actions necessary to mitigate the threats to public health and the environment presented by the release or threatened release of hazardous substances at the Site as described herein.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances and/or pollutants or contaminants from this Site, if not addressed by implementing the Removal Action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, and/or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

Section 104(c)(1) of CERCLA provides generally that the President may obligate the expenditure of CERCLA funds for Removal Actions for longer than one year, or in an amount greater than \$2 million, only in certain identified situations, one of which is where “continued response action is otherwise appropriate and consistent with the remedial action to be taken.” 42 U.S.C. § 9604(c)(1)(C).

EPA’s June 12, 1989 “Final Guidance on Implementation of the ‘Consistency’ Exemption to the Statutory Limits on Removal Actions” (Guidance) sets forth criteria for using the exemption. The criteria are satisfied in this case as follows:

- a. Consistency: The proposed Removal Action does not foreclose the remedial action. The proposed Removal Action is actually identical in part to the Remedial Action selected by EPA in December 2012. The Guidance notes that:

The ‘remedial action to be taken’ is the remedial action that, prior to the start of the removal action, was planned or could reasonably have been expected to be taken. Certainly, the actual performance of the activities that are part of a planned or expected remedial action are consistent with that action. It may turn out that after a removal done under a ‘consistency’ exemption, the Agency will decide not to take any further response action.”

- b. Appropriateness: The proposed Removal Action is “appropriate” within the meaning of the guidance because it meets the following criteria:

The proposed Removal Action will be taken to avoid threats presented by contaminated soil currently located on the Property. The threats include VI at the buildings on the Property; the potential of contact threat from the soils exposed where the asphalt was removed; and the potential of increased contamination load on groundwater.

The proposed Removal Action will reduce the scope of future cleanup and the potential for harm to human health and the environment. The contaminated soils that will be addressed in this Removal Action will not need to be addressed again in future remedial actions because they will have been removed from the Site. As such, the scope of future Remedial Actions regarding the groundwater will be decreased as the source of a significant contributor to the groundwater contamination at the Site will have been removed.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Background

In December 2012, EPA Region 3 issued a Record of Decision (ROD) announcing the selection of an interim remedial action for implementation at the Site. In the ROD, EPA identified two objectives for the interim cleanup action:

- Minimize contaminant migration to groundwater from highly contaminated soils on the Property located outside the footprint of the buildings on the Property.
- Reduce the risk to acceptable levels from direct contact with highly contaminated soils on the Property outside the footprint of the buildings on the Property.

To determine specific areas where excavation and removal of soils would occur to meet these objectives, the Remedial Program engaged a multi-step approach that generally involved the following:

Identification of Contaminants of Concern

- Data showing contamination in soils was evaluated against the EPA Region 3 Regional Screening Level Table (June 2011) to identify substances at levels exceeding 1×10^{-6} or a Hazard Index of 0.1 using the “residential direct contact” and “soil to groundwater exposure” scenarios.
- Each contaminant found at such levels was determined to be Contaminants of Concern (COC). The COCs are identified in Attachment B.

Migration of Contamination From Soil to Groundwater

- For each (COC), EPA calculated a soil concentration above which Site conditions would potentially yield a release to groundwater above the Maximum Contaminant Level (MCL) established under the Safe Drinking Water Act (this was referred to as the “MCL-based SSRG”). The MCL-based SSRG for each COC is identified in Attachment C. Soils containing COCs above the MCL-based SSRG concentration would be remediated.
- EPA further calculated for each COC a soil concentration above which Site conditions would potentially yield a release to groundwater above the more stringent Region 3 Tap Water Screening Levels (this was referred to as the TW-based SSRG”). The TW-based SSRG for each COC is identified in Attachment C. Soils not containing COCs above the TW-based SSRG would not be excavated since they would not present unacceptable risks nor result in any MCL exceedance.
- As for soils containing COCs at levels above the TW-based SSRG but below the MCL-based SSRG, a risk evaluation was performed to determine if a release of COCs from such soils into groundwater would result in an unacceptable level of risk (for carcinogens, total risk from all COCs greater than 1×10^{-4} ; for non-carcinogens, a Hazard Index greater than 1).

Contact Threats

- Soils containing COCs below the Region 3 Screening Levels (RSLs) for residential direct contact would not be remediated as they do not present unacceptable risks. The RSLs for each COC are identified in Attachment C.
- For soils containing contaminants above levels above the RSLs, a risk evaluation was conducted to determine if direct contact with such soils would result in an unacceptable level of risk (as described above). Soils presenting unacceptable risk would be excavated.

The Remedial Program modified the above-described determinations to rule out cleanup of COCs below background concentrations. For each sample location outside the building footprints, the COC concentrations were compared with the MCL-based SSRG, TW-based SSRG, direct contact RSL, and background level to make a cleanup determination. The parameters for the cleanup decision were summarized in a matrix (Table 3 of the ROD) as follows:

COC concentration in soil	Action to be taken
Greater than or equal to MCL-SSRG	Cleanup
Less than MCL-SSRG (or no MCL-SSRG exists), but greater than or equal to TW-SSRG or Direct Contact RSL	Conduct risk evaluation If $TR > 1E-04$ or $HI > 1$, remediate.
Less than both TW-SSRG and Direct Contact RSL	No action
Less than Background	No action

Application of the matrix to the sample data facilitated the identification of the areas to be cleaned up. These areas were identified in Figure 5 of the ROD.

The OSC has reviewed and considered the cleanup objectives articulated in the December 2012 ROD, relevant sampling data, the methodology used in the ROD to identify the COCs, the identification of COCs, the methodology used to identify locations where excavation would be necessary to achieve the cleanup objectives, and the conclusions reached by the Remedial Program regarding cleanup at each location identified in Table 5 of the ROD. The OSC concurs with all of the above and concludes that the proposed actions below are appropriate to abate, prevent, minimize, stabilize, mitigate, and/or eliminate the threat to public health or welfare or to the environment presented by the release and/or threatened release of hazardous substances at the Site:

B. Proposed Action Description

1. Mobilize necessary personnel, supplies and equipment to the Site.
2. Provide security to limit access to working areas.
3. Construct walkways, as needed, to permit safe parking and access to the businesses on the Property by employers, employees, patrons, and the public during the response.
4. Except as described in (5) below, excavate soil at the Property located in the "Soil Source Areas" identified in Attachment D hereto which:
 - a. contains one or more COCs at levels which equal or exceed the MCL-based SSRG;
 - b. contain one or more COCs at levels which, though less than the MCL-based SSRG but greater than or equal to the TW-based SSRG, present carcinogenic risk greater than 1×10^{-4} or a Hazard Index of greater than 1.
5. Soil adjacent to structures at the Property which triggers the excavation standards in item #4, above, will be excavated only if such excavation is possible without compromising the integrity of the structure.
6. Implement dust suppression and air monitoring to minimize exposure to airborne contaminants by employers, employees, and patrons of the business park and the public.
7. Perform confirmation sampling to ensure that all soils to be excavated in accordance with item #4, above, have been excavated.
8. Conduct TCLP or equivalent testing to determine if excavated soils contain RCRA hazardous waste.
9. Dispose of excavated soils containing no hazardous waste at an off-site RCRA Subtitle D (solid waste) facility in accordance with Section 121(d)(3) of CERCLA and 40 C.F.R. § 300.440 ; dispose of excavated soil containing hazardous waste at an off-Site Subtitle C (hazardous waste) facility in accordance with Section 121(d)(3) of CERCLA and 40 C.F.R. § 300.440.
10. Backfill excavations with clean fill and reinstall parking surfaces.
11. Demobilize personnel and equipment from the Site.

C. Contribution to Remedial Performance

The proposed Removal Action will facilitate planned and probable future remedial actions. In December 2012, EPA selected Remedial Action which included the excavation and off-site disposal of the soils that are the subject of the proposed Removal Action (see VI.A, above). The Remedial Program is expected to select additional Remedial Action to address, among other things, groundwater contamination following completion of the RI/FS for the Site. Implementation of the proposed Removal Action will reduce the scope of remedial action to be performed in the future by (1) eliminating the need to perform much of the work selected in the December 2012 ROD and (2) reducing the ongoing contaminant loading on groundwater which may slow the expansion of a contaminant plume.

D. Compliance with Applicable or Relevant and Appropriate Requirements (“ARARs”)

The Removal Action will attain applicable or relevant and appropriate requirements (ARARs) to the extent practicable given the exigencies of the situation. In December 2012, EPA issued a ROD selecting Remedial Action that included excavation of the soils to be excavated in the proposed Removal Action. ARARs for the Remedial Action were identified in Table 5 of the ROD. On August 8, 2013, the OSC asked PADEP to identify any additional or different ARARs for the proposed Removal Action by September 30, 2013. The ARARs identified in the ROD are attached hereto as Attachment E.

E. Project Schedule

The OSC estimates that approximately twelve months will be required to complete the field activities outlined in Section VI.A above.

F. Estimated Costs

The proposed distribution of funding is as follows:

	Present Ceiling	Proposed Ceiling	Total
<u>Extramural Costs</u> <u>Regional Removal Allowance Costs</u> Total Cleanup ERRS Contractor Costs (This cost category includes estimates for ERRS, subcontractors, Notices to Proceed, and IAGs with other Federal Agencies.		\$2,100,000	\$2,100,000

<u>Extramural Costs Not Funded from the Regional Allowance</u>			
Total START, including multiplier costs		\$140,000	\$140,000
Subtotal Extramural Costs		\$2,240,000	\$2,240,000
Extramural Costs Contingency (20% of Subtotal, Extramural Costs; round to nearest thousand)		\$448,000	\$448,000
OSC authorized ceiling (EPA Delegation 14-2)	\$50,000	\$2,688,000	\$2,738,000
TOTAL REMOVAL ACTION PROJECT CEILING			\$2,738,000

VII. EXPECTED CHANGE IN SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If the proposed actions at the Site are not implemented or are delayed, the threat of a release of hazardous substances, pollutants, or contaminants will continue. This release could result in exposure to the public.

As explained above, high levels of contamination have been found at the Property as shallow as 1 – 2 feet below ground surface. The removal of portions of the asphalt surface has increased the potential for these contaminants to migrate downward into the groundwater, which might end up impacting the drinking water wells down gradient of the site, as a result of precipitation and laterally as a result of wind or other weather events.

VOC vapor has migrated from groundwater into spaces beneath the foundation of buildings at the Property. Sampling results showed concentrations of VOCs vapor at high concentrations underneath Buildings A and C. VOCs are migrating from beneath Building A into the air inside the building. VOCs are not presently migrating from beneath Building C into the air inside the building.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues pertaining to the Site.

IX. ENFORCEMENT

See attached Enforcement Confidential Addendum.

X. COSTS

The total EPA costs for this removal action, based upon full-cost accounting practices that will be eligible for cost recovery, are estimated below as follows¹:

Direct Extramural Costs:	\$2,738,000
Direct Intramural Costs:	\$164,280
Total Direct Costs	\$2,902,280
Indirect Costs	\$2,085,810
Estimated EPA Costs for the Removal Action	\$4,988,090

X. RECOMMENDATION

This Action Memorandum represents the selected Removal Action for the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania, developed in accordance with CERCLA, as amended, and not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

By signing this Action Memorandum, you are also hereby establishing the documents listed below as the Administrative Record supporting the issuance of this Action Memorandum, pursuant to Section 113 (k) of CERCLA and EPA Delegation No. 14-22.

1. VI sampling documentation
2. Focused Feasibility Study, EPA 2012
3. Record of Decision, Operable Unit 1, Chem-Fab Superfund Site , EPA 2012
4. Administrative Record supporting issuance of Record of Decision, Operable Unit 1, Chem-Fab Superfund Site, EPA 2012.

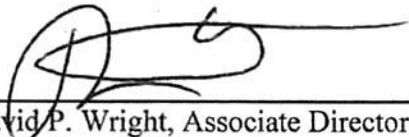
Because conditions at the Chem-Fab Site meet the Removal Action requirements of Section 300.415 of the NCP, 40 C.F.R. § 300.415, I recommend your approval of the proposed Removal Action. The total Removal Action Project Ceiling, if approved, will be \$2,738,000. Of this, an estimated \$2,100,00 comes from the Regional Removal Allowance. Please indicate your approval or disapproval below.

¹Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

Action by the Approving Official:

I have reviewed the above-stated facts and based upon those facts and the information compiled in the documents described above, I hereby determine that the release or threatened release of hazardous substances at and/or from the Site presents or may present an imminent and substantial endangerment to the public health or welfare or to the environment. I concur with the recommended removal action as outlined and establish the documents identified above as the administrative record supporting selection of this action.

APPROVED:



David P. Wright, Associate Director
Office Preparedness and Response
EPA Region 3

DATE:

9/19/13

DISAPPROVED:

David P. Wright, Associate Director
Office Preparedness and Response
EPA Region 3

DATE:

Attachments:

- A. Site Figure
- B. Contaminants of Concern
- C. Region III Screening Levels
- D. Soil Source Areas
- E. ARARs Identified in ROD

Attachment A

Chem Fab Site
Doylestown Township,
Bucks County, Pennsylvania

Legend

- Approximate Boundary
- Extra Space Storage Facility
- Approximate Boundary
- Former Chem Fab Facility

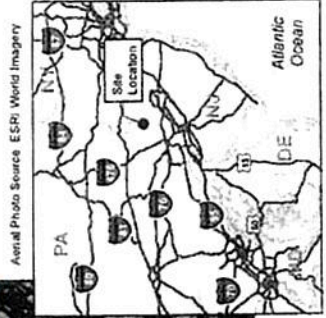
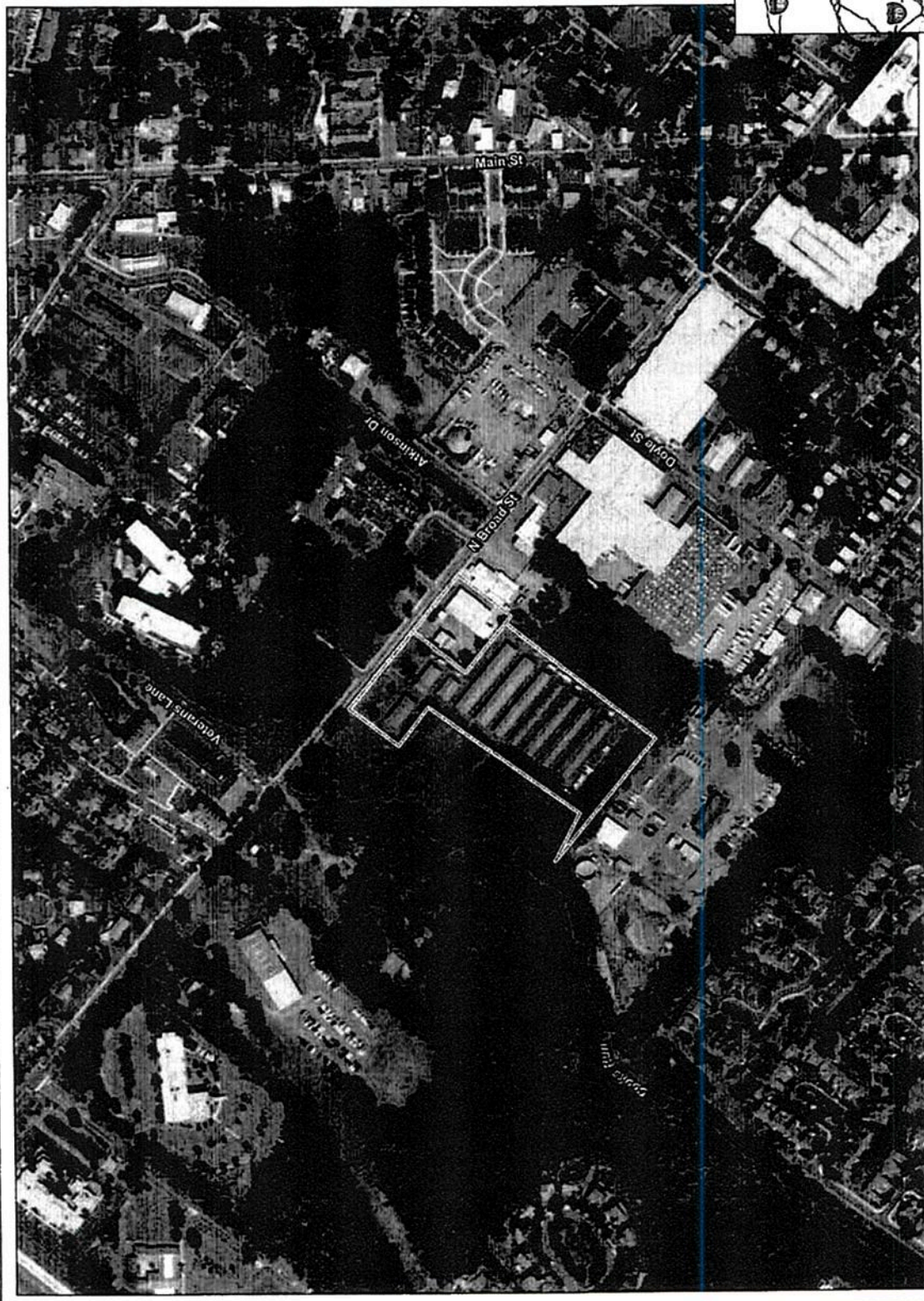
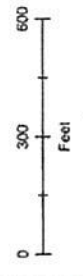


Figure 1 – Property Boundaries and Surrounding Areas



Table 2: Soil Cleanup Decision Parameters

Attachment B

Contaminant (Metal)	Soil to Groundwater		Direct Contact RSL	Background	Units
	MCL-SSRG	TW-SSRG			
Aluminum		291000	7700	20502	mg/kg
Antimony	1260	314	3.1	1.5	mg/kg
Arsenic	20.6	0.0925	0.39	6.55	mg/kg
Barium	4320	1580	1500	395	mg/kg
Cadmium	19.7	7.1	7	1.4	mg/kg
Chromium [VI]	101	0.0433	0.29		mg/kg
Cobalt		0.589	2.3	21.5	mg/kg
Copper	1720	198	310	15.7	mg/kg
Iron		30000	5500	36700	mg/kg
Lead	212		40	43.2	mg/kg
Manganese		301	180	2630	mg/kg
Mercury	5.48	0.156	0.56	0.108	mg/kg
Nickel		250	150	34.5	mg/kg
Selenium	145	52.1	39		mg/kg
Silver		85.1	39		mg/kg
Thallium	7.47	0.138	0.078	0.628	mg/kg
Vanadium		944	39	57.8	mg/kg
Zinc		3590	2300		mg/kg
Contaminant (VOC)	Soil to Groundwater		Direct Contact RSL	Background	Units
	MCL-SSRG	TW-SSRG			
Acetone		26	6100		mg/kg
Benzene	0.156	0.0128	1.1		mg/kg
Chloroform	1.28	0.00305	0.29		mg/kg
Chloromethane (methyl chloride)		0.268	12		mg/kg
Dichlorobenzene, 1,2-	37.1	2.29	190		mg/kg
Dichloroethane, 1,1-		0.039	3.3		mg/kg
Dichloroethene, 1,2-		0.565	70		mg/kg
Dichloroethene, cis-1,2-	1.2	0.125	16		mg/kg
Dichloromethane (methylene chloride)	0.0734	0.0705	11		mg/kg
Ethylbenzene	49.5	0.106	5.4		mg/kg
Hexanone, 2-		0.06034	21		mg/kg
Methyl tertyl-butyl ether		0.157	43		mg/kg
Tetrachloroethene	0.129	0.00283	0.55		mg/kg
Toluene	42.8	9.85	5000		mg/kg
Trichloroethane, 1,1,1-	3.79	17.3	870		mg/kg
Trichloroethene	0.102	0.0409	2.8		mg/kg
Vinyl Chloride	0.0341	0.000273	0.06		mg/kg
Xylene, m,p-	622	1.24	63		mg/kg
Contaminant (SVOC)	Soil to Groundwater		Direct Contact RSL	Background	Units
	MCL-SSRG	TW-SSRG			
Benzo[a]anthracene		0.673	0.15		mg/kg
Benzo[a]pyrene	15.4	0.223	0.015		mg/kg
Benzo[a]fluoranthene		2.28	0.15		mg/kg
Benzyl butyl phthalate		33.2	260		mg/kg
Bis(2-ethylhexyl) phthalate	94.1	75.3	35		mg/kg
Dimethylphenol, 2,4-		5.54	120		mg/kg
Methylnapthalene, 2-		50.4	310		mg/kg
Napthalene		0.0299	3.6		mg/kg
Nitrosodiphenylamine, n-		4.99	99		mg/kg
Trichlorobenzene, 1,2,4-	13.3	0.435	22		mg/kg

EPA Regional Screening Level (RSL) Table June 2011 used
MCL-SSRG = Maximum Contaminant Level-based Site Specific Remedial Goal
TW-SSRG = Tap Water Risk Screening Level-based Site Specific Remedial Goal
Direct Contact RSL corresponds to TR=IE-06 or HI=0.1
Background values only exist for Metals

Table 1: Chemicals Exceeding EPA Regional Screening Levels (RSLs) in Soil

Attachment C

Contaminant (Metal)	Maximum Detection	Residential Direct Contact		Soil to Groundwater		Units
		TR=1E-06	HI=0.1	TR=1E-06	HI=0.1	
Aluminum	31100		7700		5500	mg/kg
Antimony	44.2		3.1		0.066	mg/kg
Arsenic	35.9	0.39	2.2	0.0013		mg/kg
Barium	914		1500		30	mg/kg
Cadmium	2.17	1800	7		0.14	mg/kg
Chromium (VI)	781	0.29	23	0.00083		mg/kg
Cobalt	109	370	2.3		0.049	mg/kg
Copper	196		310		5.1	mg/kg
Iron	58200		5500		64	mg/kg
Lead	521		40		1.4	mg/kg
Manganese	4030		180		5.7	mg/kg
Mercury	0.6		1		0.0033	mg/kg
Nickel	271	13000	150		4.8	mg/kg
Selenium	1.74		39		0.095	mg/kg
Silver	1.43		39		0.16	mg/kg
Thallium	1.2		0.078		0.0026	mg/kg
Vanadium	66.7		39		18	mg/kg
Zinc	294		2300		68	mg/kg
Contaminant (VOC)	Maximum Detection	Residential Direct Contact		Soil to Groundwater		Units
		TR=1E-06	HI=0.1	TR=1E-06	HI=0.1	
Acetone	1.7		6100		0.45	
Benzene	0.042	1.1	8.6	0.00021		mg/kg
Chloroform	0.009	0.29	21	0.000053		mg/kg
Chloromethane (methyl chloride)	0.132		12		0.0049	mg/kg
Dichlorobenzene, 1,2-	0.58		190		0.036	mg/kg
Dichloroethane, 1,1-	0.002	3.3	1600	0.00069		mg/kg
Dichloroethene, 1,1-	0.008		24		0.012	mg/kg
Dichloroethene, 1,2-	7.2		70		0.0097	mg/kg
Dichloroethene, cis-1,2-	6.06		16		0.0021	mg/kg
Dichloromethane (methylene chloride)	0.752	11	170	0.0012		mg/kg
Ethylbenzene	41	5.4	350	0.0017		mg/kg
Hexanone, 2-	0.67		21		0.0011	mg/kg
Methyl tert-butyl ether	0.007	43	1700	0.0028		mg/kg
Tetrachloroethene (PCE)	190	0.55	37	0.000049		mg/kg
Toluene	20		500	1.6		mg/kg
Trichloroethane, 1,1,1-	11		870		0.32	mg/kg
Trichloroethylene (TCE)	4000	2.8	2.5	0.00072		mg/kg
Vinyl Chloride	0.23	0.06	7.4	0.0000056		mg/kg
Xylene, m,p-	130		63		0.02	mg/kg
Contaminant (SVOC)	Max. Detect	Residential Direct Contact		Soil to Groundwater		Units
		TR=1E-06	HI=0.1	TR=1E-06	HI=0.1	
Benzo[a]anthracene	0.187	0.15		0.01		mg/kg
Benzo[a]pyrene	0.148	0.015		0.035		mg/kg
Benzo[b]fluoranthene	0.121	0.15		0.035		mg/kg
Benzyl butyl phthalate	0.612	260	1200	0.51		mg/kg
Bis(2-ethylhexyl) phthalate	2.53	35	12	1.1		mg/kg
Dimethylphenol, 2,4-	0.4		120		0.086	mg/kg
Methylnaphthalene, 2-	2.66		31		0.075	mg/kg
Naphthalene	8.3	3.6	14	0.00047		mg/kg
Nitrosodiphenylamine, n-	0.131	99		0.075		mg/kg
Trichlorobenzene, 1,2,4-	0.099	22	6.2	0.0068		mg/kg

EPA Regional Screening Level (RSL) Table June 2011 used
 TR= Carcinogenic Target Risk
 HI= Noncancer Hazard Index
BOLD VALUES denote an exceedance of the RSL

Abstract D

Chem Fab Site
Doylestown Township,
Bucks County, Pennsylvania

- Legend**
- Soil Source Areas
 - Exceeds MCL SSRG
 - Failed Risk Evaluation
 - Does not exceed MCL SSRG or fail the risk evaluation
 - Approximate Boundary Extra Space Storage Facility
 - Approximate Boundary Former Chem Fab Facility

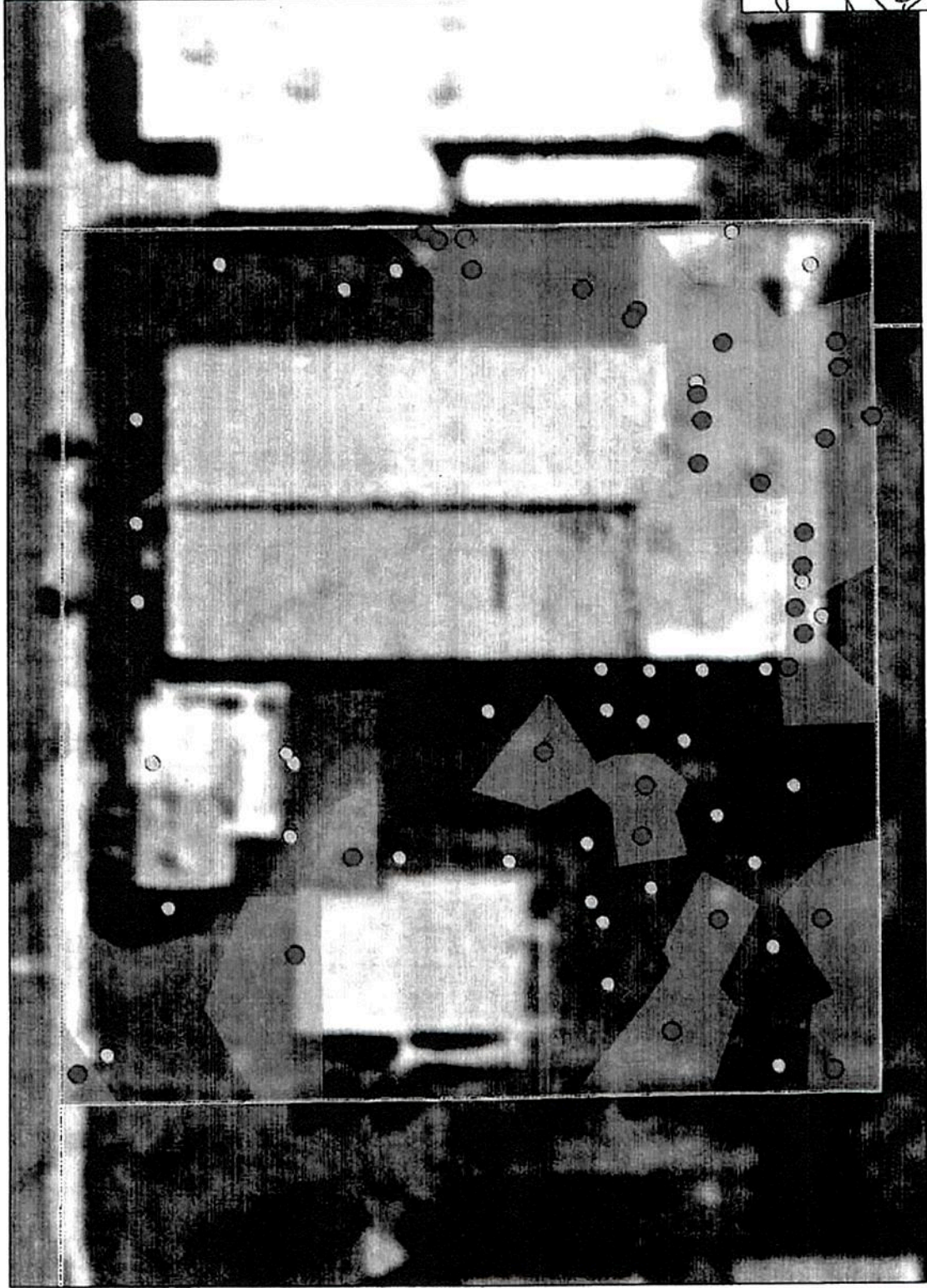
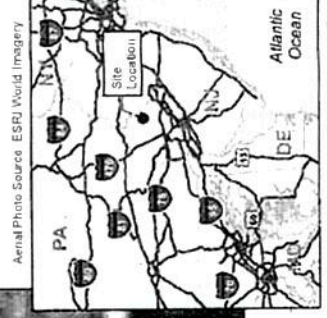
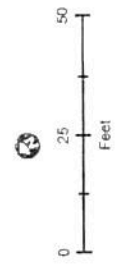


Figure 5 - Soil Remediation Areas



Table 5
 Summary of Applicable or Relevant and Appropriate Requirements (ARARs)
 Chem Fab Superfund Site
 Operable Unit 01

Attachment E

ARAR	LEGAL CITATION	CLASSIFICATION	SUMMARY OF REQUIREMENT	FURTHER DETAIL REGARDING ARARs IN THE CONTEXT OF THE REMEDY
Erosion and Sediment Control	25 Pa Code 102.4(b)(1) and (4), 102.11, 102.22	Applicable	Identifies erosion and sediment control requirements and criteria for activities involving land clearing, grading and other earth disturbances and establishes erosion and sediment control criteria.	The substantive requirements of these regulations apply to construction activities at the site which disturb the ground surface, including clearing, grading, excavation and cap installation.
Identification of Hazardous Wastes	40 CFR § 261.20-24 25 Pa Code § 261a.1	Applicable	Defines and describes process for identifying hazardous wastes based on toxicity characteristic	With respect to each of these provisions, the Commonwealth provision is a Federal ARAR if the provision is part of the Commonwealth's authorized program.
Standards applicable to Generators of Hazardous Wastes	40 CFR § 262.10(a), (h) and 262.11(c)(1) 25 Pa Code § 262a.10 and 11	Applicable	These regulations establish standards for generators of hazardous wastes, including initiating shipments and determination of hazard characteristics. Activities at the site will meet the substantive requirements of these regulations.	The Commonwealth provision is a State ARAR if the provision is more stringent than the Federal provision (within the meaning of CERCLA) or if the Commonwealth provision is beyond the scope of the Federal provision.
Standards applicable to Generators of Hazardous Wastes	40 C.F.R. § 262.34 25 Pa Code § 262a.34	Applicable	Establishes requirements for temporary storage of hazardous wastes on-site. Any excavated at the site will meet the substantive requirements of these regulations.	Otherwise, the Federal provision is a Federal ARAR.
Fugitive Air Emissions	25 PA Code 123.1 - 123.2	Applicable	Establishes the fugitive dust regulation for particulate matter.	The excavation and any other construction activities will comply with these regulations.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SUBJECT: Request for a Scope Change for the Removal Action at the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania.

FROM: Eduardo Rovira, Jr., On-Scene Coordinator
Eastern Response Branch (3HS31)

A handwritten signature in black ink, appearing to read "ER", is written over the text of the "FROM:" field.

TO: David P. Wright, Director
Office of Preparedness and Response (3HS30)

I. PURPOSE

The purpose of this "Request for a Scope Change" ("Change of Scope") is to document the need for a change of scope for a previously selected Removal Action to prevent or mitigate the threat posed by the release or substantial threat of release of hazardous substances, pollutants or contaminants at the Chem-Fab Site (the "Site") located in Doylestown Borough, Bucks County, Pennsylvania.

On November 8, 2012, using authority provided under EPA Delegation 14-2, the On-Scene Coordinator ("OSC") authorized the expenditure of funds in an amount not to exceed \$50,000 to initiate a removal action intended to reduce VOCs in suites inside an office building located 300-360 North Broad Street ("Property"), which Property is included within the Site. To accomplish this, the OSC installed portable air purifiers into selected suites within the impacted building. The OSC subsequently collected additional data to evaluate the efficacy of such units combined with the existing building vapor mitigation system in reducing VOCs levels within the building.

In January 2012, the Remedial Program completed a Focused Feasibility Study intended to evaluate alternatives to address threats presented by soils located at the Property. In December 2012, the Remedial Program issued a Record of Decision (ROD) selecting remedial action consisting of, among other things, the removal and off-site disposal of certain contaminated soils on the Property outside the footprint of the three commercial buildings on the Property.

Based on the data collected (see Section III of the Original Action Memo), potential future conditions at the Site, the extent of contamination and other reasons (e.g., lack of Remedial and State funding to do the work), the OSC determined that continued Removal Action was necessary to mitigate or prevent a threat to public health and that a change of scope, additional funding, and an exemption to the 12-month limit were required to perform such action.

On September 19, 2013, EPA issued an Action Memorandum approving a scope change, the expenditure of additional funds, and an exemption to the statutory funding and time limits on the Removal Action. The selected Removal Action consisted primarily of the excavation and off-site disposal of certain contaminated soils presently located at the Property.

This Change of Scope proposes to additionally address the threat to public health from groundwater impacted by the contaminated soils on the Property. Hazardous substances in soils at the Property have been determined to be responsible for contaminant vapor intrusion ("VI") into a commercial building on the Property and for groundwater contamination that has impacted two private supply wells down gradient from the Property. Under this Change of Scope, bottled water will be provided to one private property where such impacts are significant. The need to connect such property to public water will be decided in the near future; however, based on the results of the sampling, there is an immediate need to provide the occupants of this property with bottled water.

The Site is on the NPL and is currently the subject of an ongoing Remedial Investigation by the Remedial Program.

At this time there is no need for additional CERCLA funding. This Action Memorandum incorporates and supplements the previous Action Memorandum, signed by the Associate Director of the Office of Preparedness and Response on September 19, 2013. Where information is unchanged from the previous documents, the reader is referred to that document.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Physical Location/Site Characteristics

Please refer to attached September 2013 Action Memorandum.

2. Site Background

Please refer to attached September 2013 Action Memorandum.

3. Quantities and Types of Substances Present

On November 21, 2013, the EPA Region 3 Remedial Program collected samples from private wells on properties located along the path of the suspected groundwater plume (on North West Street). Site-related contamination was found, at levels of concern, in one such well.

Such well was resampled on January 6, 2014. During this sampling event, groundwater from the well had exceedances of the MCL for TCE. The charts below shows the levels of Site-related contaminants found in the well.

Groundwater Contaminant Levels at the Residential Property

November 21, 2013:

COC	Result (ug/L)
Cis-1,2-Dichloroethene	0.53
Tetrachloroethene	2.2
Trichloroethene	3.7

January 6, 2014:

COC	Result (ug/L)
Cis-1,2-Dichloroethene	1.2
Tetrachloroethene	3
Trichloroethene	<u>21</u>

Underlined value indicates exceedance of EPA MCL.

For additional information, please refer to attached September 2013 Action Memorandum.

4. National Priorities List

Please refer to attached September 2013 Action Memorandum.

5. State and Local Authorities' Roles

The OSC communicated with the Pennsylvania Department of Environmental Protection (PADEP) and the state does not have the resources to provide bottled water to the affected parties at this time.

For additional information, please refer to the attached September 2013 Action Memorandum.

B. Actions to Date

1. Previous Actions

Please refer to attached September 2013 Action Memorandum.

2. Current Actions

The current Removal Action consists of excavation and off-site disposal of certain soils outside of the footprint of the buildings at the property.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

As explained in Section II.A.3, above, site-related contamination has been detected in groundwater samples from a private residential well located within a mile of the Site. The contamination in the well exceeds EPA's MCL for TCE. After reviewing the data, EPA has determined that this level presents an unacceptable level of risk to the occupants at the residential property. At this point, the unacceptable risk is associated solely with drinking the water. Direct contact and inhalation risks (e.g., showering) will be calculated again when more data points are obtained from future sampling.

For additional information, please refer to attached September 2013 Action Memorandum.

IV. ENDANGERMENT DETERMINATION

Please refer to attached September 2013 Action Memorandum.

V. EXEMPTION FROM STATUTORY LIMITS

Please refer to attached September 2013 Action Memorandum.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Action Description

EPA will be providing bottled drinking water for the occupants at the residential property. It is anticipated the water will be provided for a duration of up to six months; at that time, a decision to extend the provision of bottled water will be made. Additional sampling from the wells located along the suspected path of the groundwater plume will be conducted. Once the results are back, the option/need to provide bottled water to additional properties and/or to connect the impacted properties to public water will be examined and determined.

B. Contribution to Remedial Performance

Please refer to attached September 2013 Action Memorandum.

C. Applicable or Relevant and Appropriate Requirements ("ARARs")

Please refer to attached September 2013 Action Memorandum.

D. Project Schedule

See Section VI.A, above.

E. Estimated Costs

Based on the number of affected properties, the anticipated length of time bottled water will be provided, the on-going actions at the Site and current Removal Action Project Ceiling, the need for additional funding is not required at this time.

Once the option/need of providing additional bottled water and/or connecting affected parties to public water is examined and determined, then the need for additional funding for these actions will be determined.

VII. EXPECTED CHANGE IN SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If the proposed action is not implemented or is delayed, the people drinking the water from the well at the residential property will continue to be exposed to the unacceptable risk from the ingestion of TCE.

For additional information, please refer to attached September 2013 Action Memorandum.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues pertaining to the Site.

IX. ENFORCEMENT

Please refer to attached September 2013 Action Memorandum.

X. COSTS

See Section VI.E, above.

For additional information, please refer to attached September 2013 Action Memorandum.

XI. RECOMMENDATION

This Action Memorandum represents a Change of Scope to the selected Removal Action for the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania, developed in accordance with CERCLA, as amended, and not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

By signing this Action Memorandum, you are also hereby adding the document listed below to the Administrative Record supporting the issuance of this Action Memorandum

and this Scope Change, pursuant to Section 113(k) of CERCLA and EPA Delegation No. 14-22:


1. Water sample results from affected wells, collected on 11/21/13 and 01/06/14.

Because conditions at the Chem-Fab Site meet the Removal Action requirements of Section 300.415 of the NCP, 40 C.F.R. § 300.415, I recommend your approval of the proposed Scope Change. The total Removal Action Project Ceiling, if approved, will remain at \$2,738,000. Of this, an estimated \$2,100,00 comes from the Regional Removal Allowance. Please indicate your approval or disapproval below.

Action by the Approving Official:

I have reviewed the above-stated facts and based upon those facts and the information compiled in the documents described above, I hereby determine that the release or threatened release of hazardous substances at and/or from the Site presents or may present an imminent and substantial endangerment to the public health or welfare or to the environment. I concur with the recommended removal action as outlined and establish the document identified above as an addition to the administrative record supporting selection of the Removal Action as modified herein.

APPROVED:



David P. Wright, Associate Director
Office Preparedness and Response
EPA Region 3

DATE:

5/28/14

DISAPPROVED:

David P. Wright, Associate Director
Office Preparedness and Response
EPA Region 3

DATE:

Attachments:

- A. Original Action Memo



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SUBJECT: Request for a Scope Change to Continue the Removal Action at the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania.

FROM: Eduardo Rovira, Jr., On-Scene Coordinator
Eastern Response Branch (3HS31)

TO: David P. Wright, Acting Director
Office of Preparedness and Response (3HS30)

012015

I. PURPOSE

The purpose of this "Request for a Scope Change to Continue the Removal Action ("Change of Scope")" is to document the need for a change of scope for a previously selected Removal Action to prevent or mitigate the threat posed by the release or substantial threat of release of hazardous substances, pollutants or contaminants at the Chem-Fab Site (the "Site") located in Doylestown Borough, Bucks County, Pennsylvania.

On November 8, 2012, using authority provided under EPA Delegation 14-2, the OSC authorized the expenditure of funds in an amount not to exceed \$50,000 to initiate a Removal Action intended to reduce VOCs in suites inside an office building located on 300 – 600 North Broad Street ("Property"), which Property is included within the Site. To accomplish this, the OSC installed portable air purifiers into selected suites within the impacted building. The OSC subsequently collected additional data to evaluate the efficacy of such units combined with the existing building vapor mitigation system in reducing VOCs levels within the building.

In January 2012 the Remedial Program completed a Focused Feasibility Study intended to evaluate alternatives to address threats presented by soils located at the Property. In December 2012, the Remedial Program issued a Record of Decision (ROD) selecting a remedial action consisting of, among other things, the removal and off-site disposal of certain contaminated soils on the Property outside the footprint of the three commercial buildings on the Property.

Based on the data collected (see Section III of attached Action Memoranda), potential future conditions at the Site, the extent of contamination and other reasons (e.g., lack of Remedial and State funding to do the work), the OSC determined that continued Removal Action was necessary to mitigate or prevent a threat to public health and that a change of scope, additional funding, and an exemption to the 12-month limit were required to perform such action.

On September 19, 2013, EPA issued an Action Memorandum approving a scope change, the expenditure of additional funds, and an exemption to the statutory funding and time limits on the Removal Action (“Action Memo”). The selected Removal Action consisted primarily of the excavation and off-site disposal of certain contaminated soils presently located at the Property.

On May 28, 2014, EPA issued an Action Memorandum approving a scope change on the Removal Action (“Action Memo II”). This change of scope was to provide bottled water to the residence affected by contaminated groundwater impacted by the contaminated soils on the Property. Hazardous substances in soils at the Property were determined to be responsible for contaminant vapor intrusion (“VI”) into a commercial building on the Property and groundwater contamination that has impacted two private supply wells down gradient from the Property.

This Change of Scope proposes to connect to public water the residence where such impacts, as described above, are significant.

The Site is on the NPL and is currently the subject of an ongoing Remedial Investigation by the Remedial Program.

At this time, the need for additional CERCLA funding is not needed. This Action Memorandum incorporates and supplements the previous Action Memoranda. Where information is unchanged from the previous documents, the reader is referred to that/those document(s).

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Physical Location/Site Characteristics

Please refer to attached September 2013 Action Memorandum. The location of the property to be connected to the public water supply is not disclosed to protect privacy interests.

2. Site Background

Please refer to attached September 2013 Action Memorandum.

3. Quantities and Types of Substances Present

EPA Region 3 Remedial/Removal Program have collected samples from the private well on three different occasions (11/13, 01/14 and 06/14) and have found site-related contamination each time, two of them (including the most recent)

above the MCL for TCE. Most of the occupants fall within a sensitive group population based on age.

TCE Levels at the Residential Property

Date	Result (µg/L)
November 21, 2013	3.7
January 6, 2014	<u>21</u>
June 9, 2014	<u>6.2</u>

Underlined value indicates exceedance of EPA MCL (5 µg/L).

For additional information, please refer to attached Action Memoranda.

4. National Priorities List

Please refer to attached September 2013 Action Memorandum.

5. State and Local Authorities' Roles

The OSC communicated with the Pennsylvania Department of Environmental Protection (PADEP) and the state does not have the resources to connect the affected party to public water at this time.

For more information, please refer to attached Action Memoranda.

B. Actions to Date

1. Previous Actions

Please refer to attached Action Memoranda.

2. Current Actions

A Removal Action, which consisted of excavation and off-site disposal of certain soils outside of the footprint of the buildings at the property, as included in the ROD, was conducted during the spring/summer 2014.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Please refer to attached Action Memoranda.

IV. ENDANGERMENT DETERMINATION

Please refer to attached September 2013 Action Memorandum.

V. EXEMPTION FROM STATUTORY LIMITS

Please refer to attached September 2013 Action Memorandum.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Action Description

Install a permanent connection to the affected residence from the Doylestown Township Municipal Authority water supply.

B. Contribution to Remedial Performance

Please refer to attached September 2013 Action Memorandum.

C. Applicable or Relevant and Appropriate Requirements (“ARARs”)

Please refer to attached September 2013 Action Memorandum.

D. Project Schedule

The affected residence would be connected to public water as soon as practicable.

E. Estimated Costs

The cost of connecting the affected residence to the Doylestown Township Municipal Authority water supply is estimated not to exceed \$50,000. There is currently enough money in the Removal Action Project Ceiling to continue to provide water to the affected property owner until it is connected to public water and to connect it to public water.

VII. EXPECTED CHANGE IN SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Please refer to attached September 2013 Action Memorandum.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues pertaining to the Site.

IX. ENFORCEMENT

Please refer to attached September 2013 Action Memorandum.

X. COSTS

See Section VI.E above.

For additional information, please refer to attached Action Memoranda.

XI. RECOMMENDATION

This Action Memorandum represents a Change of Scope of the selected Removal Action for the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania, developed in accordance with CERCLA, as amended, and not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

By signing this Action Memorandum, you are also hereby establishing the documents listed below as the Administrative Record supporting the issuance of this Action Memorandum, pursuant to Section 113 (k) of CERCLA and EPA Delegation No. 14-22. The document listed below is to be added to the existing Administrative Record, established when the September 19, 2013 Action Memo was signed.

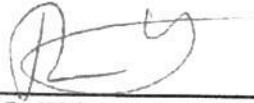
1. Water sample results from affected well, collected on 06/09/14.

Because conditions at the Chem-Fab Site meet the Removal Action requirements of Section 300.415 of the NCP, 40 C.F.R. § 300.415, I recommend your approval of the proposed Removal Action. The total Removal Action Project Ceiling, if approved, will remain at \$2,738,000. Of this, an estimated \$2,100,00 comes from the Regional Removal Allowance. Please indicate your approval or disapproval below.

Action by the Approving Official:

I have reviewed the above-stated facts and based upon those facts and the information compiled in the documents described above, I hereby determine that the release or threatened release of hazardous substances at and/or from the Site presents or may present an imminent and substantial endangerment to the public health or welfare or to the environment. I concur with the recommended removal action as outlined and establish the documents identified above as the administrative record supporting selection of this action.

APPROVED:



David P. Wright, Associate Director
Office Preparedness and Response
EPA Region 3

DATE:

1/20/15

DISAPPROVED:

David P. Wright, Associate Director
Office Preparedness and Response
EPA Region 3

DATE:

Attachments:

- A. September 19, 2013 Action Memorandum
- B. May 28, 2014 Action Memorandum



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SUBJECT: Request for a Scope Change to Continue the Removal Action at the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania.

FROM: *Eduardo Rovira, Jr.*
Eduardo Rovira, Jr., On-Scene Coordinator
Eastern Response Branch (3HS31)

TO: Bonnie G. Gross, Associate Director
Office of Preparedness and Response (3HS30)

I. PURPOSE

The purpose of this "Request for a Scope Change to Continue the Removal Action ("Change of Scope")" is to document the need for a change of scope for a previously selected Removal Action to prevent or mitigate the threat posed by the release or substantial threat of release of hazardous substances, pollutants or contaminants at the Chem-Fab Site (the "Site") located in Doylestown Borough, Bucks County, Pennsylvania.

On November 8, 2012, using authority provided under EPA Delegation 14-2, the OSC authorized the expenditure of funds in an amount not to exceed \$50,000 to initiate a Removal Action intended to reduce VOCs in suites inside an office building located on 300 – 600 North Broad Street ("Property"), which Property is included within the Site. To accomplish this, the OSC installed portable air purifiers into selected suites within the impacted building. The OSC subsequently collected additional data to evaluate the efficacy of such units combined with the existing building vapor mitigation system in reducing VOCs levels within the building.

In January 2012 the Remedial Program completed a Focused Feasibility Study intended to evaluate alternatives to address threats presented by soils located at the Property. In December 2012, the Remedial Program issued a Record of Decision (ROD) selecting a remedial action consisting of, among other things, the removal and off-site disposal of certain contaminated soils on the Property outside the footprint of the three commercial buildings on the Property.

Based on the data collected (see Section III of attached Action Memoranda), potential future conditions at the Site, the extent of contamination and other reasons (e.g., lack of Remedial and State funding to do the work), the OSC determined that continued Removal Action was necessary to mitigate or prevent a threat to public health and that a change of scope, additional funding, and an exemption to the 12-month limit were required to perform such action.

On September 19, 2013, EPA issued an Action Memorandum approving a scope change, the expenditure of additional funds, and an exemption to the statutory funding and time limits on the Removal Action (“Action Memo”). The selected Removal Action consisted primarily of the excavation and off-site disposal of certain contaminated soils presently located at the Property.

On May 28, 2014, EPA issued an Action Memorandum approving a scope change on the Removal Action (“Action Memo II”). This change of scope was to provide bottled water to the residence affected by contaminated groundwater impacted by the contaminated soils on the Property. Hazardous substances in soils at the Property were determined to be responsible for contaminant vapor intrusion (“VI”) into a commercial building on the Property and groundwater contamination that has impacted two private supply wells down gradient from the Property.

On January 20, 2015, EPA issued an Action Memorandum approving a scope change on the Removal Action (“Action Memo III”). This change of scope was to install a permanent connection to the affected residence to the Doylestown Township Municipal Authority water supply.

This Change of Scope proposes to install a permanent depressurization system to reduce indoor TCE levels in Building A to levels that pose no unacceptable risk to the tenants and their patrons.

The Site is on the NPL and is currently the subject of an ongoing Remedial Investigation by the Remedial Program.

At this time, the need for additional CERCLA funding is not needed. This Action Memorandum incorporates and supplements the previous Action Memoranda. Where information is unchanged from the previous documents, the reader is referred to that/those document(s).

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Physical Location/Site Characteristics

Please refer to attached September 2013 Action Memorandum.

2. Site Background

Please refer to attached September 2013 Action Memorandum.

3. Quantities and Types of Substances Present

EPA Region 3 Removal Program collected sub-slab and indoor air samples (Building A) in January and April 2015, and indoor air samples in June 2015. Results from the three sampling events were similar, with sub-slab TCE concentrations as high as 58,000 $\mu\text{g}/\text{m}^3$ and indoor as high as 27 $\mu\text{g}/\text{m}^3$.

EPA and ATSDR toxicologists reviewed the data and recommended that a permanent solution (e.g., negative pressure system) be installed to provide adequate ventilation of the sub-slab for the entire building. For additional information, please refer to attached Action Memoranda.

4. National Priorities List

Please refer to attached September 2013 Action Memorandum.

5. State and Local Authorities' Roles

The OSC communicated with the Pennsylvania Department of Environmental Protection (PADEP) and the state does not have the resources to install the depressurization system at this time.

For more information, please refer to attached Action Memoranda.

B. Actions to Date

1. Previous Actions

Please refer to attached Action Memoranda.

2. Current Actions

Extended the water main and connected the affected residence to the Doylestown Township Municipal Authority water supply. This work was completed the week of September 21, 2015.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Please refer to attached Action Memoranda.

IV. ENDANGERMENT DETERMINATION

Please refer to attached September 2013 Action Memorandum.

V. EXEMPTION FROM STATUTORY LIMITS

Please refer to attached September 2013 Action Memorandum.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Action Description

Install a permanent depressurization system to reduce indoor TCE levels in Building A to 8 $\mu\text{g}/\text{m}^3$ or below, which level has been determined in this situation to pose no unacceptable risk to the tenants and their patrons.

B. Contribution to Remedial Performance

Please refer to attached September 2013 Action Memorandum.

C. Applicable or Relevant and Appropriate Requirements (“ARARs”)

Please refer to attached September 2013 Action Memorandum.

D. Project Schedule

The depressurization system will be installed sometime in October 2015.

E. Estimated Costs

The cost of installing the depressurization system has been estimated not to exceed \$50,000. There is currently enough money in the Removal Action Project Ceiling to cover the cost of the installation of the system.

VII. EXPECTED CHANGE IN SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Please refer to attached September 2013 Action Memorandum.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues pertaining to the Site.

IX. ENFORCEMENT

Please refer to attached September 2013 Action Memorandum.

X. COSTS

See Section VI.E above.

For additional information, please refer to attached Action Memoranda.

XI. RECOMMENDATION

This Action Memorandum represents a Change of Scope of the selected Removal Action for the Chem-Fab Site in Doylestown Borough, Bucks County, Pennsylvania, developed in accordance with CERCLA, as amended, and not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

By signing this Action Memorandum, you are also hereby establishing the documents listed below as the Administrative Record supporting the issuance of this Action Memorandum, pursuant to Section 113 (k) of CERCLA and EPA Delegation No. 14-22. The document listed below is to be added to the existing Administrative Record, established when the September 19, 2013 Action Memo was signed.

1. Sub-slab and indoor air samples from Building A, collected in January, April and June 2015.
2. Email from EPA toxicologists, dated 9/24/15.

Because conditions at the Chem-Fab Site meet the Removal Action requirements of Section 300.415 of the NCP, 40 C.F.R. § 300.415, I recommend your approval of the proposed Removal Action. The total Removal Action Project Ceiling, if approved, will remain at \$2,738,000. Of this, an estimated \$2,100,00 comes from the Regional Removal Allowance. Please indicate your approval or disapproval below.

Action by the Approving Official:

I have reviewed the above-stated facts and based upon those facts and the information compiled in the documents described above, I hereby determine that the release or threatened release of hazardous substances at and/or from the Site presents or may present an imminent and substantial endangerment to the public health or welfare or to the environment. I concur with the recommended removal action as outlined and establish the document identified above as the administrative record supporting selection of this action.

APPROVED:

Bonnie G. Gross
Bonnie G. Gross, Associate Director
Office Preparedness and Response
EPA Region 3

DATE:

9/30/15

DISAPPROVED:

Bonnie G. Gross, Associate Director
Office Preparedness and Response
EPA Region 3

DATE:

Attachments:

- A. September 19, 2013 Action Memorandum
- B. May 28, 2014 Action Memorandum
- C. January 20, 2015 Action Memorandum

**Federal On-Scene Coordinator's After Action Report
Chem-Fab Removal Site**

**APPENDIX C
PHOTOGRAPHIC DOCUMENTATION**

**EPA REGION 3 - START
PHOTOGRAPHIC DOCUMENTATION LOG
CHEM-FAB**

CLIENT: EPA Region 3	TDD #: W5-01-16-05-002
SITE NAME: CHEM-FAB	SITE LOCATION: 300 North Broad Street, Doylestown, Pa

DATE:
3/24/2014

PHOTO ID:
P1210172.JPG

DESCRIPTION:
SW corner of the site, behind main building, showing concrete removal area covered with visquine for the night.



DATE:
3/28/2014

PHOTO ID:
P1250007.JPG

DESCRIPTION:
Shows the excavation trench at the SW corner of the site, behind the main building after 4 loads of soil hauled away.



**EPA REGION 3 - START
PHOTOGRAPHIC DOCUMENTATION LOG
CHEM-FAB**

CLIENT:
EPA Region 3

TDD #:
W5-01-16-05-002

SITE NAME:
Chem-Fab

SITE LOCATION:
300 North Broad Street, Doylestown, Pa

DATE:
4/3/2014

PHOTO ID:
P4030015.JPG

DESCRIPTION:
A second tank was discovered near the monitoring wells in the southern end of the site. This photo also shows the abandoned well which was uncovered.



DATE:
4/7/2014

PHOTO ID:
P4070024.JPG

DESCRIPTION:
Shows the edge of excavated soils near the first tank found. These soils have a strong odor, dark staining, large areas of yellow soils and high VOC readings.



**EPA REGION 3 - START
PHOTOGRAPHIC DOCUMENTATION LOG
CHEM-FAB**

CLIENT:
EPA Region 3

TDD #:
W5-01-16-05-002

SITE NAME:
Chem-Fab

SITE LOCATION:
300 North Broad Street, Doylestown, Pa

DATE:
4/16/2014

PHOTO ID:
P4160007.JPG

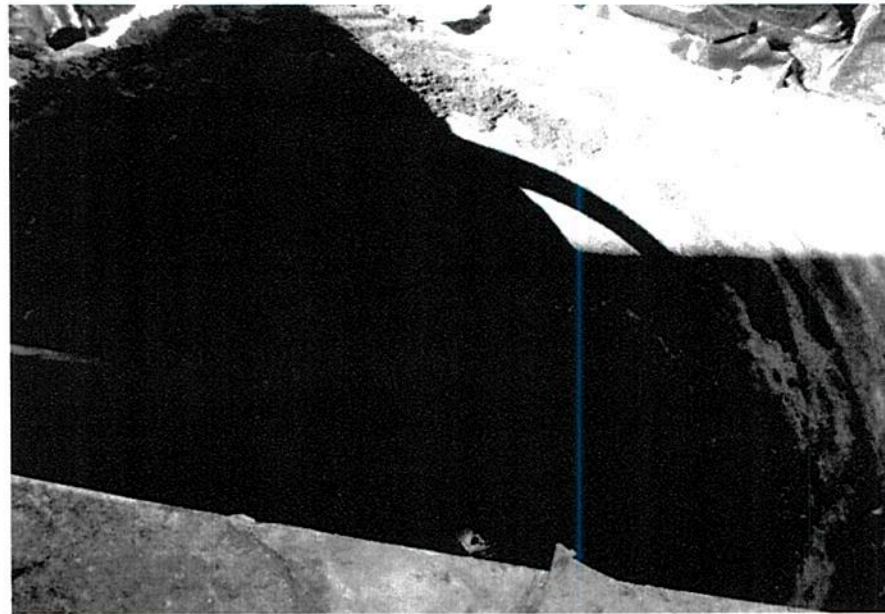
DESCRIPTION:
Shows WESTON personnel collecting soil sample CF-0414-ust-07 from excavator bucket, standing on the east side of excavation looking west.



DATE:
4/24/2014

Photo ID:
P4240004.JPG

DESCRIPTION:
Tank #1 emptied of it's contents



**EPA REGION 3 - START
PHOTOGRAPHIC DOCUMENTATION LOG
CHEM-FAB**

CLIENT: EPA Region 3	TDD #: W5-01-16-05-002
--------------------------------	----------------------------------

SITE NAME: Chem-Fab	SITE LOCATION: 300 North Broad Street, Doylestown, Pa
-------------------------------	---

DATE:
4/29/2014

PHOTO ID:
P4290022.JPG

DESCRIPTION:
Shows tank #9 and #11



DATE:
5/15/2014

SAMPLE ID:
P5150013.JPG

DESCRIPTION:
Shows the new longer VE pipe being installed to fix the vapor extraction system where the pipe did not extend past the slab originally.



**EPA REGION 3 - START
PHOTOGRAPHIC DOCUMENTATION LOG
CHEM-FAB**

CLIENT:
EPA Region 3

TDD #:
W5-01-16-05-002

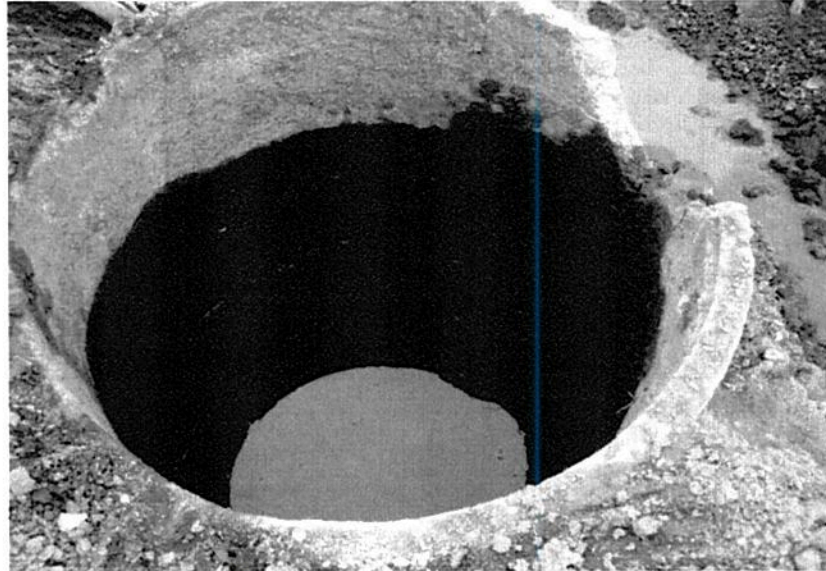
SITE NAME:
Chem-Fab

SITE LOCATION:
300 North Broad Street, Doylestown, Pa

DATE:
5/21/2014

PHOTO ID:
P5210024.JPG

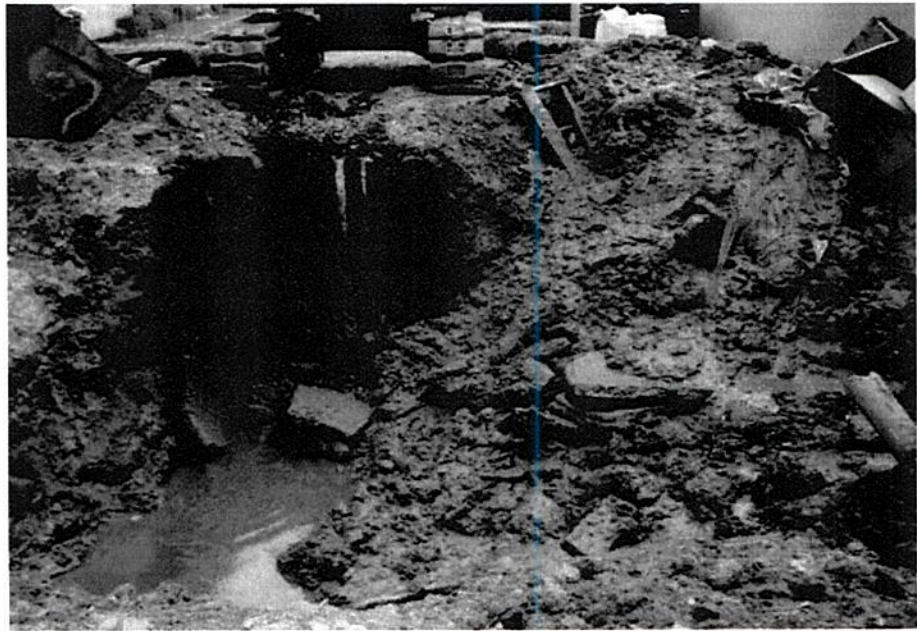
DESCRIPTION:
Shows inside of tank 11 after contents was removed.



DATE:
5/27/2014

PHOTO ID:
P5270036.JPG

DESCRIPTION:
Shows the area around tank 11 after it was demolished.



**EPA REGION 3 - START
PHOTOGRAPHIC DOCUMENTATION LOG
CHEM-FAB**

CLIENT: EPA Region 3	TDD #: W5-01-16-05-002
SITE NAME: Chem-Fab	SITE LOCATION: 300 North Broad Street, Doylestown, Pa

DATE:
6/3/2014

PHOTO ID:
P6030046.JPG

DESCRIPTION:
1st test pit dug on the western side of the site going down to ~11 ft, groundwater encountered at ~8 ft. Samples SOIL-15A and SOIL-15B collected from this test pit.



DATE:
6/5/2014

Photo ID:
P6050066.JPG

DESCRIPTION:
Totes and Drums marked with stickers for disposal.



**EPA REGION 3 - START
PHOTOGRAPHIC DOCUMENTATION LOG
CHEM-FAB**

CLIENT:
EPA Region 3

TDD #:
W5-01-16-05-002

SITE NAME:
Chem-Fab

SITE LOCATION:
300 North Broad Street, Doylestown, Pa

DATE:
6/6/2014

PHOTO ID:
P6060009.JPG

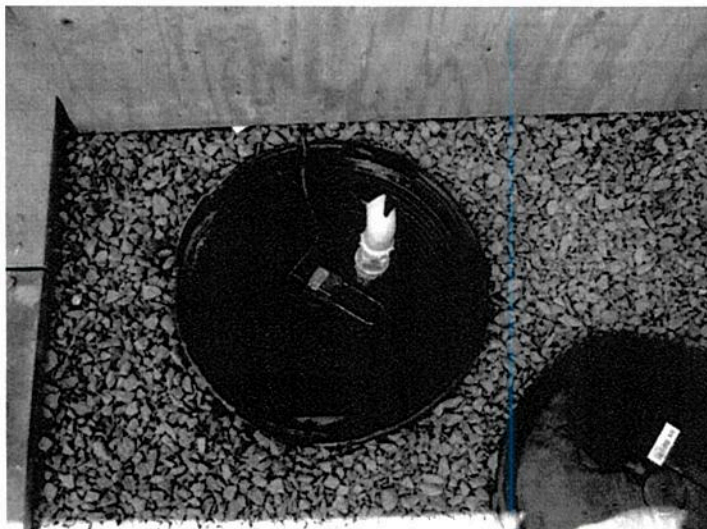
DESCRIPTION:
The remaining excavation area, SE portion of the site, after being filled in and graded.



DATE:
6/16/2014

Photo ID:
P6160023.JPG

DESCRIPTION:
Shows sump pump in front of the architects office after the installment of a new unit.



**EPA REGION 3 - START
PHOTOGRAPHIC DOCUMENTATION LOG
CHEM-FAB**

CLIENT:
EPA Region 3

TDD #:
W5-01-16-05-002

SITE NAME:
Chem-Fab

SITE LOCATION:
300 North Broad Street, Doylestown, Pa

DATE:
7/8/2014

PHOTO ID:
P7080042.JPG

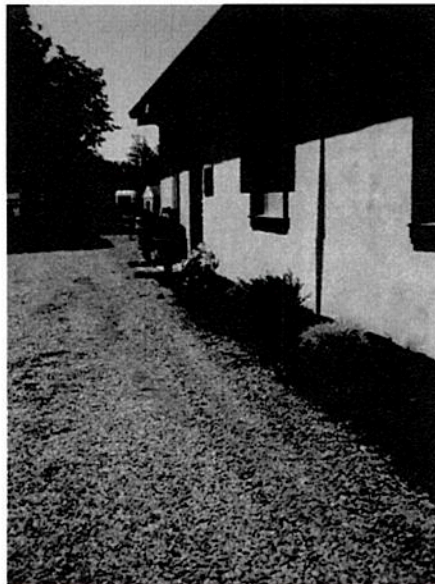
DESCRIPTION:
An additional underground tank was discovered in the southern corner of the main building under the removed slab.



DATE:
7/11/2014

Photo ID:
P7110015.JPG

DESCRIPTION:
Plantings & mulch replaced along the eastern walkway.



**EPA REGION 3 - START
PHOTOGRAPHIC DOCUMENTATION LOG
CHEM-FAB**

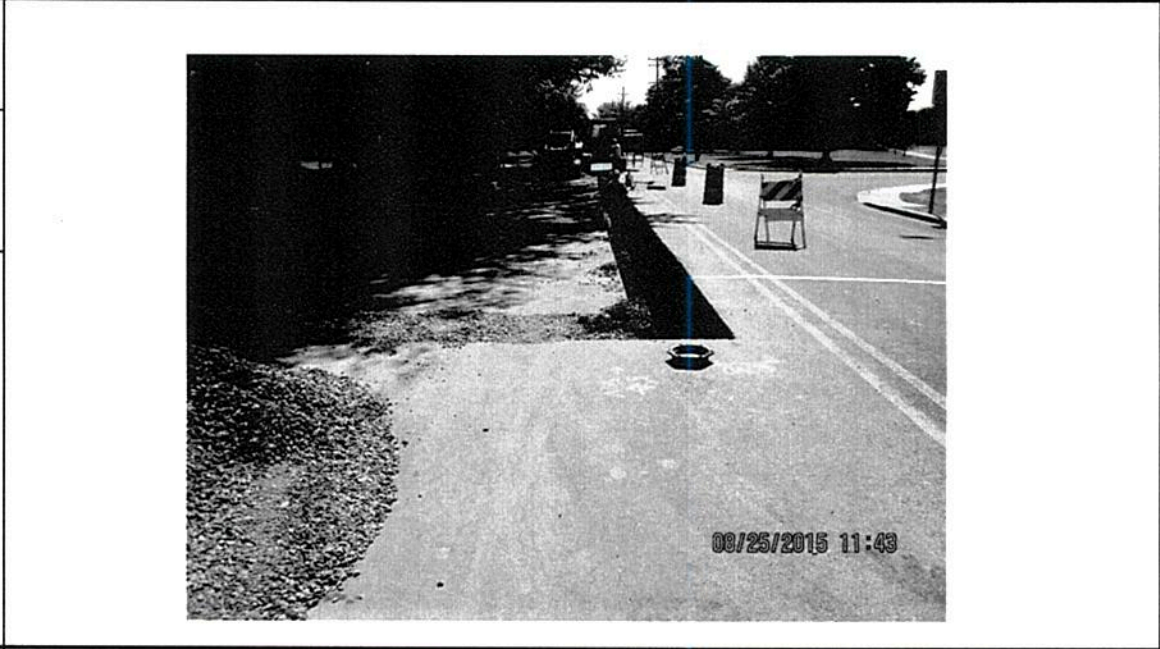
CLIENT: EPA Region 3	TDD #: W5-01-16-05-002
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SITE NAME: Chem-Fab	SITE LOCATION: 300 North Broad Street, Doylestown, Pa
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DATE:
8/25/2015

PHOTO ID:
P7080162.JPG

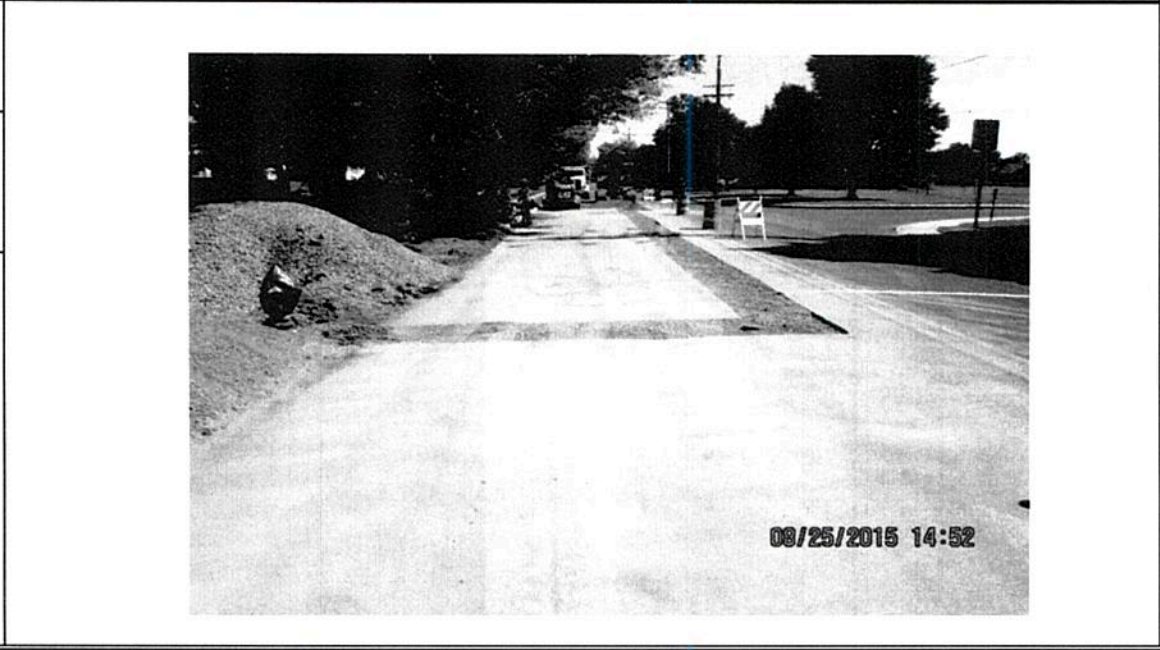
DESCRIPTION:
Trenching along North West Street for drinking water main extension.



DATE:
8/25/2015

Photo ID:
P7080166.JPG

DESCRIPTION:
Section of new water main and fire hydrant installed.



**EPA REGION 3 - START
PHOTOGRAPHIC DOCUMENTATION LOG
CHEM-FAB**

CLIENT:
EPA Region 3

TDD #:
W5-01-16-05-002

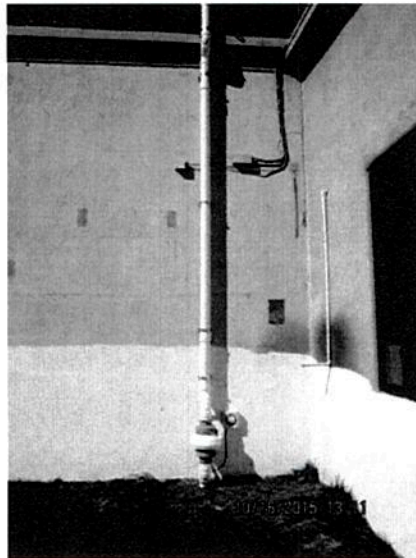
SITE NAME:
Chem-Fab

SITE LOCATION:
300 North Broad Street, Doylestown, Pa

DATE:
10/16/2015

PHOTO ID:
P7080174.JPG

DESCRIPTION:
View of depressurization fan and guage (#1).



DATE:
10/16/2015

Photo ID:
P7110175.JPG

DESCRIPTION:
View of depressurization fans and guages (#6 and #7).



**EPA REGION 3 - START
PHOTOGRAPHIC DOCUMENTATION LOG
CHEM-FAB**

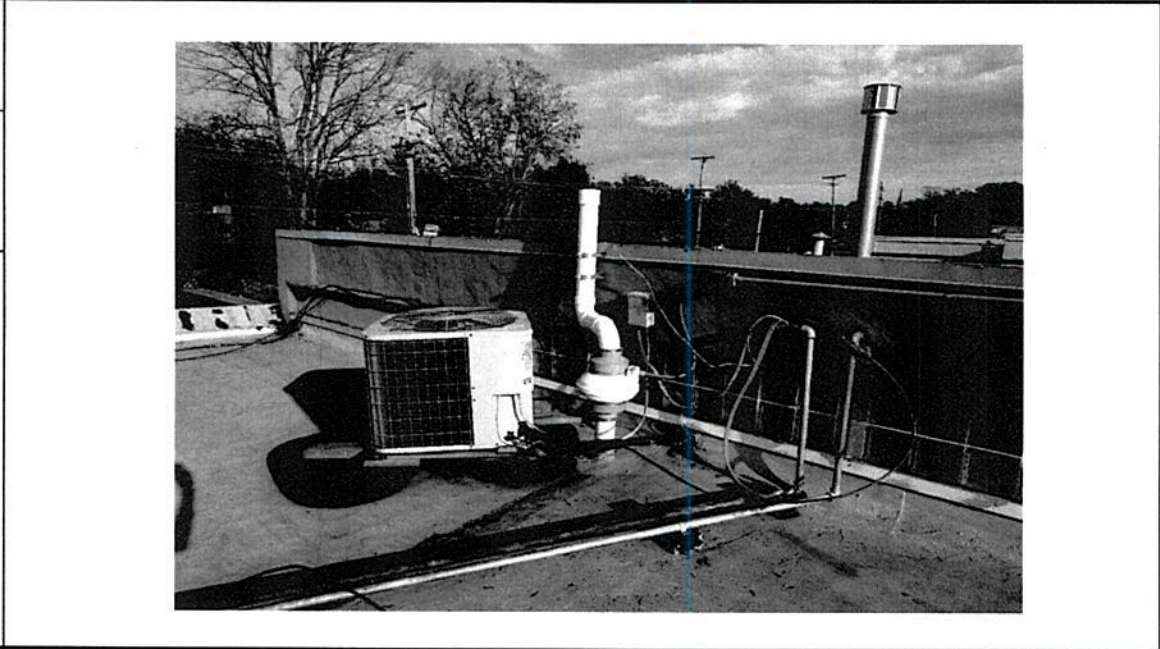
CLIENT: EPA Region 3	TDD #: W5-01-16-05-002
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SITE NAME: Chem-Fab	SITE LOCATION: 300 North Broad Street, Doylestown, Pa
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DATE:
10/16/2015

PHOTO ID:
N/A

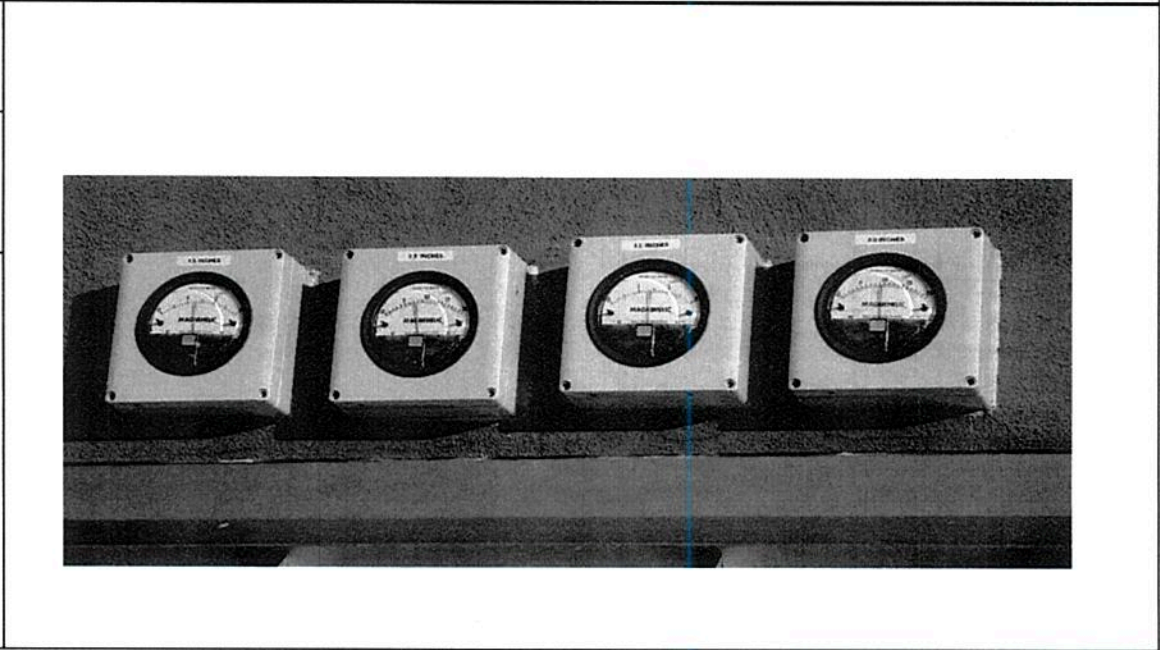
DESCRIPTION:
View of depressurization fan (#5).



DATE:
10/16/2015

Photo ID:
N/A

DESCRIPTION:
System Two, Three, Four, Five gauges.



**EPA REGION 3 - START
PHOTOGRAPHIC DOCUMENTATION LOG
CHEM-FAB**

CLIENT:
EPA Region 3

TDD #:
W5-01-16-05-002

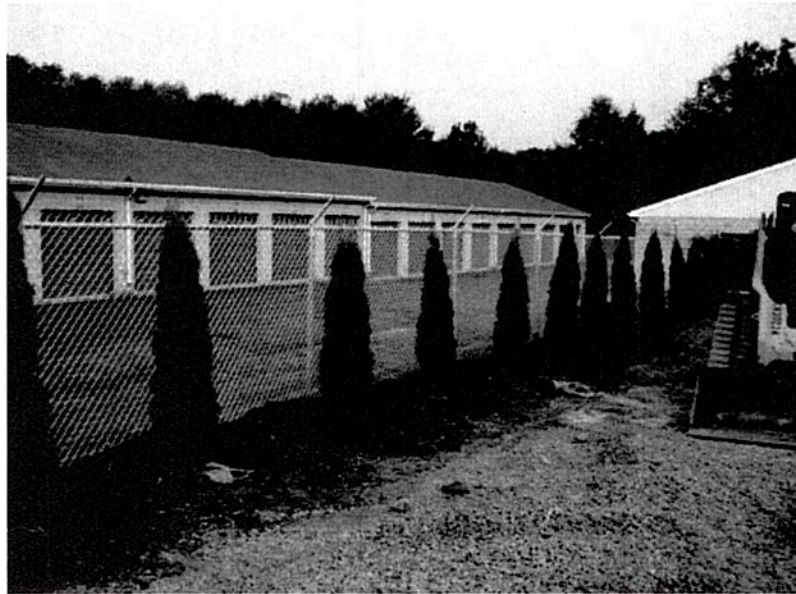
SITE NAME:
Chem-Fab

SITE LOCATION:
300 North Broad Street, Doylestown, Pa

DATE:
7/8/2014

PHOTO ID:
P7080042.JPG

DESCRIPTION:
Southern side of site showing
new chain link fence.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

MAY 31 2017

VIA CERTIFIED MAIL & EMAIL

Turog Properties Limited
c/o Heywood Becker
Box 180
Carversville, PA 18913

**Re: Chem-Fab Corporation Superfund Site: Order Directing
Turog Properties Limited to Perform Work**

Dear Mr. Becker:

Enclosed please find an administrative order ("Order") issued by the U.S. Environmental Protection Agency ("EPA") directing Turog Properties Limited ("Turog") to perform certain work in connection with the Chem-Fab Superfund Site in Doylestown, Bucks County, Pennsylvania ("Chem-Fab Site" or "Site"). An Administrative Record supporting issuance of the Order is available for review by contacting EPA as provided in Section XXV (Administrative Record) of the Order.

The Order directs Turog to operate and maintain a sub-slab depressurization system ("System") installed in one of the three commercial buildings located at 300 N. Broad Street in Doylestown. Operation and maintenance of the System is necessary to prevent volatile organic contaminants from migrating into the commercial office suites currently owned and leased by Turog. The work required by the Order includes, among other things, the following:

- Ensuring that the system is powered
- Checking gauges that track system pressure
- Checking fans to ensure they are operational
- Replacement of non-operational fans
- Indoor air sampling in each tenant space once per year

- Providing notice to EPA of building changes that might impact the efficacy of the system

Please see the Order for details on these and other requirements of the document.

The Order is effective ten (10) calendar days after the date of this letter unless Turog requests a conference or submits written materials pursuant to Section VII (Opportunity to Confer) of the Order. If Turog requests a conference or submits written materials, the effective date is the later of the 10th calendar day after the conference or the date on which written materials are submitted, unless EPA determines that the Order should be modified based on the conference or written materials. Please see Section VIII (Effective Date) for additional details regarding the effective date of the Order.

In accordance with Section IX (Notice of Intent to Comply), Turog is required to notify EPA of Turog's intent to comply with the Order no later than five (5) calendar days after the Order becomes effective. The Order requires performance of various activities/submission of various documents in accordance with a schedule set forth in the Order (e.g., notice of contractors in Paragraph 14, designation of a Project Coordinator in Paragraph 15, submission of a work plan in Paragraph 20, submission of a legal notice in Paragraph 31, submission of a certification in Paragraph 40, etc.) Please read the Order carefully to identify all requirements in the document.

Please contact EPA On Scene Coordinator Eduardo Rovira at (215) 814-3436 if you have any technical questions regarding the Order or have your attorney contact EPA Sr. Assistant Regional Counsel Andrew Goldman at (215) 814-2487 with any legal questions.

Sincerely,



Karen Melvin, Director
Hazardous Site Cleanup Division
EPA Region III

Enclosure

cc: Eduardo Rovira (3HS31)
Andrew Goldman (3RC41)

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III**

IN THE MATTER OF:	:	
	:	
CHEM-FAB SITE	:	
Doylestown, Pennsylvania	:	EPA Docket No. CERC-03-2017-014-DC
	:	
Turog Properties Limited,	:	
	:	
Respondent	:	
	:	
Proceeding Under Section 106(a)	:	
of the Comprehensive Environmental	:	
Response, Compensation, and	:	
Liability Act of 1980, as amended	:	
42 U.S.C. § 9606(a)	:	
	:	

**ADMINISTRATIVE ORDER
FOR REMOVAL RESPONSE ACTION**

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I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Order for Removal Response Action (“Order”) is issued under the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (“CERCLA”), 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of the United States Environmental Protection Agency (“EPA”) by Executive Order No. 12580, 52 Fed. Reg. 2923 (Jan. 23, 1987), and further delegated to the Director of the EPA Region III Hazardous Site Cleanup Division.

2. This Order pertains to property located at 300-360 North Broad Street, Doylestown, Pennsylvania, and further identified in the Bucks County, Pennsylvania Tax Office as Tax Parcel 8-5-1-1 (the “Property”). This Order requires Respondent to conduct removal actions described herein to abate an imminent and substantial endangerment to the public health or welfare or the environment that may be presented by the actual or threatened release of hazardous substances at or from the Site.

3. EPA has notified the Commonwealth of Pennsylvania (“State”) of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

II. PARTIES BOUND

4. This Order applies to and is binding upon Respondent and its successors and assigns. Any change in ownership or control of the Site or change in the corporate or partnership status of Respondent, including, but not limited to, any transfer of assets or real or personal property, shall not alter Respondent’s responsibilities under this Order.

5. Respondent shall provide a copy of this Order to each contractor hired to perform the Work required by this Order and to each person representing Respondent with respect to the Site or the Work, and shall condition all contracts entered into hereunder upon performance of the Work in conformity with the terms of this Order. Respondent or its contractors shall provide written notice of the Order to all subcontractors hired to perform any portion of the Work required by this Order. Respondent shall nonetheless be responsible for ensuring that its contractors and subcontractors perform the Work in accordance with the terms of this Order.

III. DEFINITIONS

6. Unless otherwise expressly provided in this Order, terms used in this Order that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Order or in appendices to or documents incorporated by reference into this Order, the following definitions shall apply:

“CERCLA” shall mean the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §§ 9601-9675.

“Day” or “day” shall mean a calendar day. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or federal or State holiday, the period shall run until the close of business of the next working day.

“Depressurization System” shall mean the subslab depressurization system installed at the Property by EPA and more fully described in Attachment 2 of this Order.

“Effective Date” shall mean the effective date of this Order as provided in Section VIII.

“EPA” shall mean the United States Environmental Protection Agency and its successor departments, agencies, or instrumentalities.

“EPA Hazardous Substance Superfund” shall mean the Hazardous Substance Superfund established by the Internal Revenue Code, 26 U.S.C. § 9507.

“National Contingency Plan” or “NCP” shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

“Order” shall mean this Administrative Order for Removal Response Action and all appendices attached hereto. In the event of conflict between this Order and any appendix or attachment, this Order shall control.

“Paragraph” shall mean a portion of this Order identified by an Arabic numeral or an upper or lower case letter.

“Parties” shall mean EPA and Respondent.

“Property” shall mean property at 300-360 N. Broad Street, Doylestown, Bucks County, Pennsylvania, and which is identified as Tax Parcel 08-005-001-001 in the Bucks County, Pennsylvania property tax records.

“RCRA” shall mean the Resource Conservation and Recovery Act, also known as the Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992.

“Respondent” shall mean Turog Properties Limited.

“Section” shall mean a portion of this Order identified by a Roman numeral.

“Site” shall mean the Chem-Fab Superfund Site located at and around the Property.

“State” shall mean the Commonwealth of Pennsylvania.

“Transfer” shall mean to sell, assign, convey, lease, mortgage, or grant a security interest in, or where used as a noun, a sale, assignment, conveyance, or other disposition of any interest by operation of law or otherwise.

“United States” shall mean the United States of America and each department, agency, and instrumentality of the United States, including EPA.

“Waste Material” shall mean (a) any “hazardous substance” under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (b) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (c) any “solid waste” under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and (d) any “regulated substance” under the Pennsylvania Land Recycling and Environmental Remediation Standards Act, 35 P. S. § § 6026.101—6026.909).

“Work” shall mean all activities Respondent is required to perform under this Order, except those required by Section XV (Retention of Records).

IV. FINDINGS OF FACT

7. EPA makes the following findings of fact:

a. Respondent is a Pennsylvania limited partnership which owns the Property. The Property currently contains three commercial structures corresponding to the following addresses:

1. 300 - 330 North Broad Street: A one-story building of approximately 11,000 square feet with no basement and which contains several tenants (“Building A”);

2. 340 North Broad Street: A three-story building with a basement/crawlspace and which contains several tenants (“Building B”); and

3. 350 - 360 North Broad Street: A two-story building with no basement and which contains several tenants (“Building C”).

b. The Property is generally depicted in Attachment 1 to this Order. The Property is part of the Chem-Fab Superfund Site, which includes (1) the Property, and (2) all locations to which hazardous substances or pollutants or contaminants present on the Property at any time have migrated.

c. From the mid-1960s to the late 1970s, Chem-Fab, Inc. (“CF”), a subsidiary of Harvey Radio Company, Inc., operated an electroplating and metal etching facility on the Property. CF’s operations at the Property generated wastes that included metals, chlorinated solvents such as 1,1,1 - trichloroethane (“1,1,1-TCA”), methylene chloride, and trichloroethene (“TCE”), ferric chloride, mineral spirits, chromic acid rinse water and sludge,

chromic acid, sulfuric acid, sodium bisulfate, and sodium hydroxide. CF was cited several times during the 1960s and 1970s by the Bucks County Health Department and the Pennsylvania Department of Health for spills and releases of industrial wastes at the Property from above- and below-ground tanks and a catch basin to Cooks Run, a nearby creek.

d. In the late 1970s, CF was acquired by Boarhead Corporation, a business established by Manfred DeRewal, Sr. ("DeRewal") to acquire a property, located approximately 20 miles from the Chem-Fab Site, which came to be known as the Boarhead Farms Site. DeRewal also owned DeRewal Chemical Company, Inc. ("DCC"), which removed, transported, and disposed of chemical waste generated by other companies. During the 1970s, DCC disposed of chemical wastes at locations which included the Boarhead Farms Site, a rented warehouse property on Ontario Street in Philadelphia, and the Wissinoming Industrial Park in Philadelphia. During this period, liquid wastes, including hundreds of thousands of gallons of ammonia, hydrochloric acid, and pickle liquor waste, were transported from various industrial entities to the Property for disposal. In addition to CF, two other entities associated with DeRewal - a computer assembly business and a gallium reclamation business--operated at the Property for an unknown period of time. CF owned the Property through approximately May 1999.

e. In August 1987, EPA performed a Preliminary Assessment and Site Inspection of the Doylestown Groundwater Site and the Chem-Fab Site. During this assessment, water samples were collected from residential wells and a municipal well located in the vicinity of the Property. Analytical results indicated that the groundwater in the vicinity of the Property was contaminated with volatile organic contaminants including, among other things, TCE and 1,1-dichloroethene ("1,1-DCE") at levels exceeding maximum contaminant levels established pursuant to the Safe Drinking Water Act, 42 U.S.C. § 300f, et seq. Additional chlorinated solvents were also found in the groundwater including 1,1,1-TCA, tetrachloroethene ("PCE"), 1,1-dichloroethane ("1,1-DCA"), and trans-1,2-dichloroethene ("trans-1,2-DCE").

f. In or around October 1987, EPA conducted a removal action at the Chem-Fab Site consisting of the delivery of bottled water and carbon filtration units to affected residences and connection of affected residences to public water supplies.

g. In September 1994, EPA investigated the Chem-Fab Site and collected samples from containers, an underground storage tank, soils, and an excavated sump at the Property. The investigation revealed, among other things, improperly and incompatibly stored drums of hazardous material including flammable liquids and acids stored inside and outside buildings at the Site; contaminated liquid and sludge in a sump located in an on-site warehouse; an underground storage tank containing 6,000 gallons of liquid and sludge found to contain hazardous substances; and two truck trailers containing laboratory equipment and numerous drums and containers.

h. 1994-1995, EPA conducted a second removal action at the Chem-Fab Site. During that response EPA removed 117 drums and 8,400 gallons of liquid wastes, including chromium-contaminated wastes from the underground storage tank as well as solid wastes and fuel oils from the Property. During the response action EPA found label information on drums and other containers indicating the presence of xylene, toluene, hydrochloric acid, sulfuric acid,

nitric acid, muriatic acid, caustic soda, methyl isobutyl ketone, polymeric isocyanate, benzenesulfonic acid, nickel rinse waste, methylene chloride, ferric chloride, chromate waste acid, and anhydrous ammonia.

i. In or around November 1998, the Pennsylvania Department of Environmental Protection (“PADEP”) assumed the lead role in further assessing the Chem-Fab Site.

j. In or around 1999, the Property was acquired at a tax sale by 300 North Broad Street, Ltd., which converted the industrial buildings at the Property for office use.

k. In 1999-2000, PADEP performed an investigation at the Site and found TCE; PCE; and methylene chloride in soils at the Property as well as chromium; 1,1,1-TCA; 1,1-DCE; 1,1-DCA; methylene chloride; PCE; TCE; vinyl chloride; and cis-1,2-DCE in groundwater at the Site.

l. In 2001 - 2002, PADEP conducted additional investigations and found:

1. PCE; TCE; 1,1-DCE; methylene chloride; and hexavalent chromium in soils at the Property;

2. hexavalent chromium and volatile organic contaminants including; 1,2-dichloroethene (“1,2-DCE), TCE, and PCE in soils beneath Building A; and

3. 1,1,1-TCA; 1,1-DCE; 1,1-DCA; PCE; TCE; cis-1,2-DCE; chloroform; carbon tetrachloride; methylene chloride, and metals including chromium (III), hexavalent chromium, and nickel in groundwater at the Site.

m. In 2003 - 2004, PADEP collected additional groundwater samples and found concentrations of previously detected contaminants. PADEP also concluded that the groundwater contaminant plume had migrated further downgradient. A surface water sample from the swale on the adjacent Extra Space Storage property exhibited contamination by hexavalent chromium.

n. In or around 2005, Respondent acquired the Property by Deed in Lieu of Execution and is the current owner of the Property.

o. In June 2007, PADEP requested the Agency for Toxic Substances and Disease Registry (“ATSDR”) to perform a health consultation on several exposure pathways at the Chem-Fab Site including the vapor intrusion pathway. Based on the detections of VOCs in the soil samples collected previously, ATSDR recommended that “environmental agencies should more fully characterize the potential indoor air pathway and vapor intrusion issues.”

p. EPA proposed the Chem-Fab Site for the CERCLA National Priorities List (“NPL”) in September 2007. The Site was finalized on the NPL in March 2008.

q. In March and June 2008, PADEP collected indoor air samples from Buildings A, B, and C at the Property. These samples showed detections of 1,1,1-TCA, TCE and PCE. ATSDR released a Health Assessment in September 2008 which concluded that while the current levels of contaminants in the indoor air posed no apparent public health hazard to the employees or visitors, over time the levels could change and further characterization of the indoor air was necessary.

r. EPA commenced a Remedial Investigation ("RI") at the Chem-Fab Site in or around 2009.

s. EPA collected sub-slab soil (October 2011 and January 2012) and indoor air samples from the tenant spaces (October 2011, January 2012, and August 2012) at the Property to determine whether, and to what extent, volatile organic contaminants ("VOCs") in the soil beneath and/or near each of the buildings were entering the tenant spaces. EPA concluded that VOCs presented no unacceptable risks in tenant spaces within Buildings B and C but that VOCs, primarily TCE, were present at unacceptable levels in Building A.

t. In or around July 2012, Respondent turned on an existing vapor mitigation system in Building A. In August 2012, EPA took air samples within leased spaces and determined that VOC levels had not been significantly reduced.

u. On November 8, 2012, EPA selected a removal action to mitigate threats presented by unacceptable levels of VOC in the tenant spaces within Building A. The selected action consisted of the installation of temporary portable air purifiers with carbon filters into some tenant spaces.

v. In January 2013, EPA again took air samples within the leased spaces in Building A. The results showed that the combined operation of Respondent's existing mitigation system and the air purifiers installed by EPA reduced VOC levels in the tenant spaces to acceptable levels.

w. During the spring/summer of 2014, EPA conducted a removal action at the Site in which certain contaminated soils outside the footprint of the buildings on the Property were excavated and disposed of off-Site. EPA acknowledged that the work could impact Respondent's tenants and, in the agreement governing entry to the Property for such work, agreed that the Agency would, among other things:

1. Coordinate with Respondent to ensure that Respondent understood the work;
2. Schedule and conduct the work in such manner as will minimize, to the extent practicable, the impact to the business located at the Property;
3. Take precautions to protect business owners, their patrons, and the public from hazardous which may be present during the course of the work;

4. Exercise reasonable efforts to place the work trailers so as to minimize impacts on visitor parking; and

5. Leave the Property, including vegetation, in the same or similar condition as EPA found it prior to entering the Property to conduct the work.

x. In January 2015, EPA again collected sub-slab and indoor air samples within the leased spaces in Building A at the Property. The results showed elevated VOC levels in the sub-slab samples and indoor VOC levels that were higher than the previous set of samples revealed. During a Site visit after the sampling event, the OSC noticed the fan of the vapor extraction system was not running which could have been the cause of the increased indoor VOC levels.

y. In April 2015, EPA collected an additional round of sub-slab and indoor air samples within the leased spaces in Building A. Although at the time of this sampling event the fan of the vapor extraction system was running, the results were very similar to the results from January 2015; therefore, the EPA toxicologist and ATSDR recommended that the carbon filters in the air purifiers units be changed, that steps be taken to ensure that the units operate appropriately, and that additional air purifiers be installed within Building A. EPA had noticed some of the tenants were not running the air purifiers with carbon filters as they should. EPA replaced the filters of the existing units, bought two additional units and reminded all Building A tenants they should run the units continuously unless their windows and doors were wide open and that there was good circulation within their leased space.

z. The carbon filters in the air purifiers units were changed in May 2015, and in June 2015 EPA collected an additional round of sub-slab and indoor air samples within the leased spaces in Building A. The results were very similar to the ones from April 2015; therefore, EPA decided to investigate a more permanent/long term solution.

aa. In July 2015, a study of how the air was moving under Building A was conducted by EPA and a depressurization system for the building was designed by EPA based on the findings of the study. The study indicated that the existing mitigation system was ineffective.

bb. In October 2015, a new depressurization system was installed at Building A by EPA. Eight suction fans and associated piping were strategically placed in and around the building foundation. The existing sub-slab ventilation system was removed during the installation of the new system. The new fans were wired by an electrical contractor, and the system was fine-tuned to obtain negative sub-slab pressure. All pipe roof penetrations were flashed by a roofing contractor. Magnehelic gauges (measuring pressure differentials) were installed to permit the building owner and tenants to confirm system operation. Because some of the fans produced a noticeable sound while in operation, EPA added a muffler system to the exhausts of some of the fans to reduce noise.

cc. In November 2015, a ninth suction fan was installed by EPA along the outside side wall of space 330 in Building A due to pressure readings taken after the first eight suction fans were installed.

dd. In January 2016, EPA collected an additional round of sub-slab and indoor air samples within the leased spaces in Building A. Validated data showed decreased VOCs levels, both indoor and in the sub-slab. Indoor air levels were found to be acceptable by EPA.

ee. In March 2016, a tenth suction fan (with two suction points) was installed along the outside wall of spaces 324 and 328 to ensure coverage of the entire perimeter of the Building A. After the installation of the tenth suction fan, EPA collected an additional round of sub-slab and indoor air samples within the leased spaces in Building A. Validated data confirmed the results from March, showing decreased VOCs levels both indoors and in the sub-slab. The levels were again found to be acceptable by EPA.

ff. In or around August 2016, EPA learned that the fans were not operational following the departure of a tenant from Building A. The problem was determined to be a wiring issue which was resolved on or about December 11, 2016.

gg. EPA conducted additional sampling to determine the efficacy of the system in January 2017. Validated results from this sampling event were received in March 2017.

hh. On February 2, 2017, the EPA Region III Air Protection Division concluded based on air modeling that the emissions from the system pipes presented no threat to human health and were orders of magnitude lower than the Region's action level.

ii. VOCs found in suites in Building A at the Property, including 1,1,1-TCA, TCE and PCE, are listed as hazardous substances at 40 C.F.R. § 302.4.

jj. In the absence of evidence to the contrary, and assuming conditions impacting the migration of VOCs into Building A remain constant, EPA has concluded that continued reduction of VOCs to acceptable levels within the tenant spaces in Building A depends on the following:

1. Continuous operation—24 hours a day, seven days a week, 365 days a year (“24/7/365”)—of the depressurization system installed by EPA, as may be modified in response to changes in floorplan or the foundation of Building A or other factors which cause indoor VOC levels to reach or exceed $8 \mu\text{g}/\text{m}^3$ (“Depressurization System”). Attachment 2 is a detailed report describing the system installed by EPA and its operation.

2. Maintenance of the Depressurization System in accordance with the requirements of this Order.

3. Collection and analysis of indoor air samples in accordance with the requirements of this Order.

4. Prevention of penetration of the foundation of Building A or, if penetration occurs, use of proper sealants to ensure no transmission of soil gas into the building.

5. Modification of the Depressurization System as necessary in the event of changes to the floorplan or the foundation of Building A or other factors which cause indoor TCE levels to reach or exceed $8 \mu\text{g}/\text{m}^3$.

kk. Between August 4, 2016 and April 24, 2017, EPA attempted to reach a settlement with Respondent under which Respondent would operate and maintain the Depressurization System under an Administrative Order on Consent. In addition, during this time EPA actively engaged with Respondent to respond to questions and comments regarding the configuration and operation of the Depressurization System; to confirm that emissions from the Depressurization System were safe; and to explain that implementation of an action such as excavation of subslab soils to obviate the need to operate the Depressurization System was premature but would be considered as part of the ongoing Site-wide Remedial Investigation/Feasibility Study.

ll. Respondent did not commit to operate and maintain the Depressurization System under an Administrative Order on Consent within the timeframe provided by EPA.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

8. Based on the Findings of Fact set forth above, and the Administrative Record supporting issuance of this Order, EPA has determined that:

a. The Chem-Fab Site, including the Property, is a “facility” as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

b. Respondent is a “person” as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

c. Respondent is a liable party under one or more provisions of Section 107(a) of CERCLA, 42 U.S.C. § 9607(a). Specifically, Respondent is an “owner” and/or “operator” of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).

d. The contamination (including 1,1,1-TCA, TCE and PCE) found at the Site, as identified in the Findings of Fact above, includes “hazardous substances” as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

e. The continued migration of soil gases within the soil beneath Building A at the Property, as described in Section IV (Findings of Fact), constitutes an actual and/or threatened “release” of a hazardous substance from the facility as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

f. The conditions described in Section IV (Findings of Fact) above may constitute an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from the facility within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a). EPA determined in Action Memoranda approved on September 19, 2013 and September 30, 2015 that the conditions at the Site relating to the migration of soil vapors may constitute an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from the facility within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

g. The removal actions required by this Order are necessary to protect the public health, welfare, or the environment.

VI. ORDER

9. Based upon the Findings of Fact, Conclusions of Law and Determinations set forth above, and the Administrative Record supporting issuance of this Order, Respondent is hereby ordered to comply with all provisions of this Order and any modifications to this Order, including all appendices to this Order and all documents incorporated by reference into this Order.

VII. OPPORTUNITY TO CONFER

10. Within ten (10) days after this Order is signed, Respondent may, in writing, request a conference with EPA to discuss this Order, including its applicability, the factual findings and the determinations upon which it is based, the appropriateness of any actions Respondent is ordered to take, or any other relevant and material issues or contentions that Respondent may have regarding this Order.

11. Respondent may appear in person or by an attorney or other representative at the conference. Any such conference shall be held at least five (5) days after the conference is requested. Respondent may also submit written comments or statements of position on any matter pertinent to this Order no later than five (5) days after the conference or within ten (10) days after this Order is signed if Respondent does not request a conference. This conference is not an evidentiary hearing, does not constitute a proceeding to challenge this Order, and does not give Respondent a right to seek review of this Order. Any request for a conference or written comments or statements should be submitted to:

Andrew S. Goldman (3RC41)
Sr. Assistant Regional Counsel
U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103
(215) 814-2487
Goldman.andrew@epa.gov

VIII. EFFECTIVE DATE

12. This Order shall be effective ten (10) days after the Order is transmitted to the Respondent unless a conference is requested or written materials are submitted in accordance with Section VII (Opportunity to Confer). If a conference is requested or written materials are submitted, this Order shall be effective on the later of the tenth (10th) day after the day of the conference, or the tenth (10th) day after written materials, if any, are submitted, unless EPA determines that the Order should be modified based on the conference or written materials. In such event, EPA shall notify Respondent, within the ten (10) day period, that EPA intends to modify the Order. The modified Order shall be effective five (5) days after it is signed by EPA.

IX. NOTICE OF INTENT TO COMPLY

13. No later than five (5) days after the Effective Date, Respondent shall notify EPA in writing of Respondent's irrevocable intent to comply with this Order. Such written notice shall be sent to EPA as provided in Paragraph 11. Respondent's written notice shall describe, using facts that exist on or prior to the Effective Date, any "sufficient cause" defense asserted by Respondent under Sections 106(b) and 107(c)(3) of CERCLA, 42 U.S.C. §§ 9606(b) and 9607(c)(3). The absence of a response by EPA to the notice required by this Paragraph shall not be deemed to be acceptance of Respondent's assertions. Failure of Respondent to provide such notice of intent to comply within this time period shall, as of the Effective Date, be treated as a violation of this Order by Respondent.

X. DESIGNATION OF CONTRACTOR, PROJECT COORDINATOR, AND ON-SCENE COORDINATOR

14. **Selection of Contractors, Personnel.** All Work performed under this Order shall be under the direction and supervision of qualified personnel. Within thirty (30) days after the Effective Date, and before the Work set forth below begins, Respondent shall notify EPA in writing of the names, titles, addresses, telephone numbers, email addresses, and qualifications of the personnel, including contractors, subcontractors, consultants, and laboratories to be used in carrying out such Work. If, after the commencement of the Work, Respondent retains additional contractors or subcontractors, Respondent shall notify EPA of the names, titles, contact

information, and qualifications of such contractors or subcontractors retained to perform the Work at least five (5) days prior to commencement of Work by such additional contractors or subcontractors. EPA retains the right, at any time, to disapprove of any or all of the contractors and/or subcontractors retained by Respondent. If EPA disapproves of a selected contractor or subcontractor, Respondent shall retain a different contractor or subcontractor and shall notify EPA of that contractor's or subcontractor's name, title, contact information, and qualifications within five (5) days after EPA's disapproval. The qualifications of the persons undertaking the Work for Respondent shall be subject to EPA's review for verification based on objective assessment criteria (e.g., experience, capacity, technical expertise) and that they do not have a conflict of interest with respect to the project.

15. Within ten (10) days after the Effective Date, Respondent shall designate a Project Coordinator who shall be responsible for administration of the Work required by this Order and shall submit to EPA the designated Project Coordinator's name, title, address, telephone number, email address, and qualifications. Respondent's Project Coordinator shall not be its legal representative in this matter. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during the Work. EPA retains the right to disapprove of the designated Project Coordinator who does not meet the requirements of Paragraph 14 (Selection of Contractors, Personnel). If EPA disapproves of the designated Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name, title, contact information, and qualifications within five (5) days following EPA's disapproval. Respondent shall have the right to change its Project Coordinator, subject to EPA's right to disapprove. Respondent shall notify EPA no less than five (5) days before such a change is made. The initial notification may be made verbally, but shall be promptly followed by a written notification. Communications between Respondent and EPA, and all documents concerning the activities performed pursuant to this Order, shall be directed to the Project Coordinator. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Order shall constitute receipt by Respondent.

16. EPA has designated the following person as its On-Scene Coordinator (OSC):

Eduardo Rovira (3HS31)
U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103
(215) 514-6887
Rovira.eduardo@epa.gov

EPA will notify Respondent of a change of its designated OSC. Communications between Respondent and EPA, and all documents concerning the activities performed pursuant to this Order, shall be directed to the OSC in accordance with Paragraph 21.a.

17. The OSC shall be responsible for overseeing Respondent's implementation of this Order. The OSC shall have the authority vested in a Remedial Project Manager and an OSC by the NCP, including the authority to halt, conduct, or direct any Work required by this Order, or

to direct any other response action when s/he determines that conditions at the Site constitute an emergency situation or may present a threat to public health or welfare or the environment. Absence of the OSC from the Site shall not be cause for stoppage or delay of Work.

XI. WORK TO BE PERFORMED

18. Respondent shall accomplish the following items:

a. Operation of the Depressurization System: Respondent shall ensure that the Depressurization System, described in detail in Attachment 2 of this Order and which may be modified from time to time in accordance with this Order, runs continuously (24 hours per day/7 days per week/365 days per year), subject only to periodic maintenance and unanticipated power interruptions. The Depressurization System shall be run until EPA notifies Respondent in writing that the Depressurization System is no longer needed to ensure that TCE concentrations are below $8 \mu\text{g}/\text{m}^3$ VOCs within Building A at the Property. This obligation, which includes arranging for and paying for electric service for the Depressurization System, shall commence upon the Effective Date notwithstanding the requirement to submit a work plan pursuant to Paragraph 20.

b. Maintenance of the Depressurization System: Respondent shall maintain the Depressurization System to ensure its continued effectiveness until EPA determines that the Depressurization System is no longer needed to ensure that TCE concentrations below $8 \mu\text{g}/\text{m}^3$ within Building A at the Property. Such maintenance shall include, but shall not be limited to, the following:

1. No less frequently than once every ninety (90) days, check each magnehelic gauge installed in the Depressurization System, including those installed by EPA and those that may be installed by EPA or Respondent in the future, to determine whether the gauge reads within 25% of its initial vacuum reading which is posted on the gauge. The ten gauges installed by EPA as of the Effective Date of this Order are depicted in Figure 2 of Attachment 2. In the event one or more gauges are found to read outside its/their initial vacuum reading by 25% or more, notify the EPA Project Coordinator within 48 hours of such finding(s). Respondent shall comply with all EPA Project Coordinator requests for additional information/inspections for each gauge so identified.

2. No less frequently than once every ninety (90) days, check each of the fans installed in the Depressurization System, including those installed by EPA and those that may be installed by EPA or Respondent in the future. The ten fans installed by EPA are depicted in Figure 7 of Attachment 2. In the event one or more fans ceases operation completely, operates in a manner that does not keep its magnehelic gauge reading within 25% of the initial reading, or operates in a manner that evidences imminent failure (e.g., noisy operation), Respondent shall, within 48 hours of becoming aware of such condition, replace such fan with a unit that has specifications that are substantially identical to those described for the fans in Attachment 2 and shall notify the EPA Project Coordinator within 48 hours after such replacement.

c. **Sampling:** Respondent shall conduct air sampling, as specified below, to monitor the effectiveness of the Depressurization System until EPA determines that the Depressurization System is no longer needed to ensure that TCE concentrations are below 8 $\mu\text{g}/\text{m}^3$ within Building A at the Property. Such sampling shall include the following:

1. Perform indoor air sampling in each existing and future tenant space (whether in use or not) in Building A during January or February of each year. Samples shall be taken at the locations indicated in Attachment 3 unless the interior configuration of the tenant spaces is changed. If the existing configuration is changed (e.g., walls added or removed), Respondent shall notify EPA and EPA will make modifications as necessary to the sampling locations and Respondent shall sample all locations within Building A as indicated by EPA.

2. Analyze air samples for the contaminants identified in Attachment 4 of this Order using the following parameters:

Sampling Device: Summa Canister (24-hour regulator)

Matrix: Air

Parameter: VOCs

Method: TO-15 + TICs

3. Copies of samples results shall be provided to the EPA Project Coordinator no later than ten (10) business days after the validated data have been received.

d. **Notice of Changes to Existing Floorplans, Status of the Foundation, or Factors Which Cause Indoor VOC Levels to Exceed Acceptable Levels.** Respondent shall notify EPA of any construction at Building A or other event or condition which results in any of the following:

1. a significant change to the layout or size of any existing or future tenant space within Building A; or

2. damage to or penetration of the foundation of Building A; or

3. TCE levels at or above 8 $\mu\text{g}/\text{m}^3$ within Building A.

Such notice shall be provided no less than five (5) days after Respondent becomes aware, or should have been aware through the exercise of due diligence, of such circumstances. In the event Respondent notifies EPA of, or EPA otherwise becomes aware of, any of the above-described events or condition, EPA may require a modification to the Removal Work Plan described in Paragraph 20.a, below, to (a) require the installation of additional equipment necessary to keep TCE within all spaces in Building A below 8 $\mu\text{g}/\text{m}^3$, (b) require modification to existing equipment or to the structure to keep TCE within all spaces in Building A below 8 $\mu\text{g}/\text{m}^3$, or (c) any combination of the above.

e. **Records.** Maintain records documenting all actions taken to comply with this Order including, but not limited to, records documenting (1) maintenance of the Depressurization System, (2) sampling, including dates and results and (3) changes to Building

A triggering the notice requirement of Paragraph 18.d, above. All such records shall be maintained for the period of time established for record retention in Section XV (Record Retention).

19. For any regulation or guidance referenced in this Order, the reference will be read to include any subsequent modification, amendment, or replacement of such regulation or guidance. Such modifications, amendments, or replacements apply to the Work only after Respondent receives notification from EPA of the modification, amendment, or replacement.

20. Work Plan and Implementation.

a. Within thirty (30) days after the Effective Date, in accordance with Paragraph 21 (Submission of Deliverables), Respondent shall submit to EPA for review and approval a draft work plan for performing the Work (the "Removal Work Plan"), including the actions generally described Paragraph 18. The draft Removal Work Plan shall provide a description of, and an expeditious schedule for, performance of the Work.

b. EPA may approve, disapprove, require revisions to, or modify the draft Removal Work Plan in whole or in part. If EPA requires revisions, Respondent shall submit a revised draft Removal Work Plan within ten (10) days after receipt of EPA's notification of the required revisions. Respondent shall implement the Removal Work Plan as approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Removal Work Plan, the schedule, and any subsequent modifications shall be incorporated into and become fully enforceable under this Order.

c. Upon approval or approval with modifications of the Removal Work Plan Respondent shall commence implementation of the Work in accordance with the schedule included therein. Respondent shall not commence or perform any Work except in conformance with the terms of this Order. Respondent shall notify EPA at least forty-eight (48) hours prior to performing any Work on-Site pursuant to the EPA-approved Removal Work Plan.

d. Unless otherwise provided in this Order, any additional deliverables that require EPA approval under the Removal Work Plan shall be reviewed and approved by EPA in accordance with this Paragraph 20.

e. Any non-compliance with any EPA-approved plans, reports, specifications, schedules, or other deliverables shall be considered a violation of the requirements of this Order. Determinations of non-compliance shall be made by EPA.

f. Approval of the Removal Work Plan shall not limit EPA's authority under the terms of this Order to require Respondent to conduct activities consistent with this Order to accomplish the Work outlined in this Section.

21. Submission of Deliverables

a. Except as otherwise provided in this Order, Respondent shall direct all submissions required by this Order to the OSC designated pursuant to Paragraph 16. Respondent shall submit all deliverables required by this Order or any approved work plan to EPA in accordance with the schedule set forth in such plan.

b. Respondent shall submit all deliverables in electronic form or in the form specified by the OSC. If any deliverable includes maps, drawings, or other exhibits that are larger than 8.5 x 11 inches, Respondent shall also provide EPA with paper copies of such exhibits.

22. Sampling and Analysis Plan. As part of the Removal Work Plan required by Paragraph 20.a, Respondent shall submit a Sampling and Analysis Plan to EPA for review and approval that is consistent with this Order and the NCP. Upon its approval by EPA, the Sampling and Analysis Plan shall be incorporated into and become enforceable under this Order.

23. Health and Safety Plan. Within thirty (30) days after the Effective Date, Respondent shall submit for EPA review and comment a Health and Safety Plan that ensures the protection of on-site workers and the public during performance of on-site Work under this Order. This plan shall be prepared in accordance with "OSWER Integrated Health and Safety Program Operating Practices for OSWER Field Activities," Pub. 9285.0-OIC (Nov. 2002), available on the NSCEP database at <https://www.epa.gov/nscep>, and "EPA's Emergency Responder Health and Safety Manual," OSWER Directive 9285.3-12 (July 2005 and updates), available at <https://www.epaosc.org/HealthSafetyManual/manual-index.htm>. In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration (OSHA) regulations found at 29 C.F.R. Part 1910. Upon receipt of notification by EPA, Respondent shall also include contingency planning in such document. Respondent shall incorporate all changes to the plan recommended by EPA and shall implement the plan during performance of on-Site work required by this Order.

24. Community Involvement Plan. EPA will prepare a community involvement plan if required by EPA guidance and the NCP. If requested by EPA, Respondent shall participate in community involvement activities, including participation in (a) the preparation of information regarding the Work for dissemination to the public, with consideration given to including mass media and/or Internet notification, and (b) public meetings that may be held or sponsored by EPA to explain activities at or relating to the Site. Respondent's support of EPA's community involvement activities may include providing online access to initial submissions and updates of deliverables to (a) any community advisory groups, (b) any technical assistance grant recipients and their advisors, and (c) other entities to provide them with a reasonable opportunity for review and comment. All community involvement activities conducted by Respondent at EPA's request are subject to EPA's oversight. Upon EPA's request, Respondent shall establish a community information repository at or near the Site to house one copy of the administrative record.

25. **Progress Reports.** Respondent shall submit a written progress report to EPA concerning actions undertaken pursuant to this Order on a quarterly basis (every ninety (90) days) or as otherwise requested by EPA, from the date of receipt of EPA's approval of the Removal Work Plan until issuance of Notice of Completion of Work pursuant to Section XXIV, unless otherwise directed in writing by the OSC. These reports shall describe all significant developments during the preceding period, including the actions performed and any problems encountered, analytical data received during the reporting period, and the developments anticipated during the next reporting period, including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

26. **Final Report.** Within thirty (30) days after EPA notifies Respondent that the Depressurization System is no longer needed to ensure that TCE concentrations are below 8 $\mu\text{g}/\text{m}^3$ within Building A at the Property, Respondent shall submit for EPA review and approval a final report summarizing the actions taken to comply with this Order. EPA will review and approve the final report in accordance with Section XXIV (Notice of Completion of Work). The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP, 40 C.F.R. § 300.165 ("OSC Reports"). The final report shall include a good faith estimate of total costs or a statement of actual costs incurred in complying with the Order, a listing of quantities and types of materials removed off-Site or handled on-Site, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destination(s) of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the removal actions (e.g., manifests, invoices, bills, contracts, and permits). The final report shall also include the following certification signed by a responsible corporate official of Respondent or Respondent's Project Coordinator:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

27. **Off-Site Shipments.** No off-Site shipments of hazardous substances or pollutants or contaminants are anticipated from performance of the Work. In the event performance of the Work generates hazardous substances or pollutants or contaminants, the following provisions shall apply:

a. Respondent may ship hazardous substances, pollutants, and contaminants from the Site to an off-Site facility only if it complies with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondent will be deemed to be in compliance with CERCLA § 121(d)(3) and 40 C.F.R. § 300.440 regarding a shipment if

Respondent obtains a prior determination from EPA that the proposed receiving facility for such shipment is acceptable under the criteria of 40 C.F.R. § 300.440(b).

b. Respondent may ship Waste Material from the Site to an out-of-state waste management facility only if, prior to any shipment, it provides written notice to the appropriate state environmental official in the receiving facility's state and to the OSC. This notice requirement will not apply to any off-Site shipments when the total quantity of all such shipments will not exceed ten cubic yards. The written notice must include the following information, if available: (1) the name and location of the receiving facility; (2) the type and quantity of Waste Material to be shipped; (3) the schedule for the shipment; and (4) the method of transportation. Respondent shall also notify the state environmental official referenced above and the OSC of any major changes in the shipment plan, such as a decision to ship the Waste Material to a different out-of-state facility. Respondent shall provide the notice after the award of the contract for the removal action and before the Waste Material is shipped.

c. Respondent may ship Investigation Derived Waste (IDW) from the Site to an off-Site facility only if it complies with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), 40 C.F.R. § 300.440, and EPA's "Guide to Management of Investigation Derived Waste," OSWER 9345.3-03FS (Jan. 1992). Wastes shipped off-Site to a laboratory for characterization, and RCRA hazardous wastes that meet the requirements for an exemption from RCRA under 40 C.F.R. § 261.4(e) shipped off-Site for treatability studies, are not subject to 40 C.F.R. § 300.440.

XII. QUALITY ASSURANCE, SAMPLING, AND DATA ANALYSIS

28. Respondent shall use quality assurance, quality control, and other technical activities and chain of custody procedures for all samples consistent with "EPA Requirements for Quality Assurance Project Plans (QA/R5)," EPA/240/B-01/003 (March 2001, reissued May 2006), "Guidance for Quality Assurance Project Plans (QA/G-5)," EPA/240/R-02/009 (December 2002), and "Uniform Federal Policy for Quality Assurance Project Plans," Parts 1-3, EPA/505/B-04/900A-900C (March 2005).

29. Access to Laboratories.

a. Respondent shall ensure that EPA personnel and its authorized representatives are allowed access at reasonable times to all laboratories utilized by Respondent pursuant to this Order. In addition, Respondent shall ensure that such laboratories shall analyze all samples submitted by EPA pursuant to the QAPP for quality assurance, quality control, and technical activities that will satisfy the stated performance criteria as specified in the QAPP and that sampling and field activities are conducted in accordance the Agency's "EPA QA Field Activities Procedure," CIO 2105-P-02.1 (9/23/2014) available at <https://www.epa.gov/irmpoli8/epa-qa-field-activities-procedures>. Respondent shall ensure that the laboratories it utilizes for the analysis of samples taken pursuant to this Order meet the competency requirements set forth in EPA's "Policy to Assure Competency of Laboratories, Field Sampling, and Other Organizations Generating Environmental Measurement Data under Agency-Funded Acquisitions" available at <https://www.epa.gov/measurements/documents->

about-measurement-competency-under-acquisition-agreements and that the laboratories perform all analyses using EPA-accepted methods. Accepted EPA methods consist of, but are not limited to, methods that are documented in the EPA's Contract Laboratory Program (<https://www.epa.gov/clp>), SW 846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (<https://www.epa.gov/hw-sw846>), "Standard Methods for the Examination of Water and Wastewater" (<http://www.standardmethods.org/>), 40 C.F.R. Part 136, "Air Toxics - Monitoring Methods" (<https://www3.epa.gov/ttnamti1/airtox.html>)." However, upon approval by EPA, Respondent may use other appropriate analytical method(s), as long as (i) quality assurance/quality control (QA/QC) criteria are contained in the method(s) and the method(s) are included in the QAPP, (ii) the analytical method(s) are at least as stringent as the methods listed above, and (iii) the method(s) have been approved for use by a nationally recognized organization responsible for verification and publication of analytical methods (e.g., EPA, ASTM, NIOSH, or OSHA). Respondent shall ensure that all laboratories it uses for analysis of samples taken pursuant to this Order have a documented Quality System that complies with ASQ/ANSI E4:2014 "Quality management systems for environmental information and technology programs – Requirements with guidance for use" (American Society for Quality, February 2014), and "EPA Requirements for Quality Management Plans (QA/R-2)" EPA/240/B-01/002 (March 2001, reissued May 2006), or equivalent documentation as determined by EPA. EPA may consider Environmental Response Laboratory Network (ERLN) laboratories, laboratories accredited under the National Environmental Laboratory Accreditation Program (NELAP), or laboratories that meet International Standardization Organization (ISO 17025) standards or other nationally recognized programs as meeting the Quality System requirements. Respondent shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Order are conducted in accordance with the procedures set forth in the QAPP approved by EPA.

b. Upon request, Respondent shall provide split or duplicate samples to EPA or its authorized representatives. Respondent shall notify EPA not less than seven (7) days in advance of any sample collection activity. In addition, EPA shall have the right to take any additional samples that EPA deems necessary. Upon request, EPA shall provide to Respondent split or duplicate samples of any samples it takes as part of EPA's oversight of Respondent's implementation of the Work.

c. Respondent shall submit to EPA, in the next monthly progress report as described in Paragraph 25 (Progress Reports) copies of the results of all sampling and/or tests or other data obtained or generated by or on behalf of Respondent with respect to the Site and/or the implementation of this Order.

XIII. PROPERTY REQUIREMENTS

30. **Agreements Regarding Access and Non-Interference.** Respondent shall, with respect to the Property: (i) provide EPA and the State and their representatives, contractors, and subcontractors with access at all reasonable times to the Property to conduct any activity regarding the Order, including those activities listed in Paragraph 30.a (Access Requirements); and (ii) refrain from using the Property in any manner that EPA determines will interfere with or adversely affect the implementation, integrity, or protectiveness of the removal action.

a. **Access Requirements.** The following is a list of activities for which access is required regarding the Property:

1. Monitoring the Work;
2. Verifying any data or information submitted to EPA;
3. Conducting investigations regarding contamination at or near the Site;
4. Obtaining samples;
5. Assessing the need for, planning, implementing, or monitoring response actions;
6. Assessing implementation of quality assurance and quality control practices as defined in the approved quality assurance quality control plan;
7. Implementing the Work pursuant to the conditions set forth in Section XVIII (Enforcement/Work Takeover);
8. Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Respondent or its agents, consistent with Section XIV (Access to Information);
9. Assessing Respondent's compliance with the Order; and
10. Determining whether the Property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted under the Order.

In making entry to the Property EPA intends to coordinate with Respondent to ensure that Respondent understands the nature and purpose of such entry; schedule and conduct work in such manner as will minimize, to the extent practicable, the impact to the business located at the Property; take precautions to protect business owners, their patrons, and the public from hazardous substances which may be present during the course of the work; and exercise reasonable efforts to place equipment so as to minimize impacts on visitor parking.

31. Notice to Successors-in-Title.

a. Respondent shall, within fifteen (15) days after the Effective Date, submit for EPA approval a notice to be filed regarding the Property in the appropriate land records. The notice must: (1) include a proper legal description of the Property; (2) provide notice to all successors-in-title that: (i) the Property is part of, or related to, the Site; (ii) EPA has selected a removal action for the Site; and (iii) EPA has ordered a potentially responsible party to implement that removal action; and (3) identify the EPA docket number and Effective Date of this Order. Respondent shall record the notice within ten (10) days after EPA's approval of the notice and submit to EPA, within 10 days thereafter, a certified copy of the recorded notice.

b. Respondent shall, prior to entering into a contract to Transfer the Property, or sixty (60) days prior to Transferring the Property, whichever is earlier:

1. Notify the proposed transferee that EPA has selected a removal action regarding the Site, that EPA has ordered a potentially responsible party to implement such removal action, (identifying the EPA docket number and the Effective Date of this Order); and

2. Notify EPA of the name and address of the proposed transferee and provide EPA with a copy of the above notice that it provided to the proposed transferee.

32. In the event of any Transfer of the Property, unless EPA otherwise consents in writing, Respondent shall continue to comply with its obligations under this Order.

33. Notwithstanding any provision of this Order, EPA and the State retain all of their access authorities and rights, as well as all of their rights to require land, water, or other resource use restrictions, including enforcement authorities related thereto under CERCLA, RCRA, and any other applicable statute or regulations.

XIV. ACCESS TO INFORMATION

34. Respondent shall provide to EPA, upon request, copies of all records, reports, documents, and other information (including records, reports, documents, and other information in electronic form) (hereinafter referred to as "Records") within Respondent's possession or control or that of its contractors or agents relating to activities at the Site or to the implementation of this Order, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information regarding the Work. Respondent shall also make available to EPA, for purposes of investigation, information gathering, or testimony, its employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

35. Privileged and Protected Claims.

a. Respondent may assert that all or part of a Record requested by EPA is privileged or protected as provided under federal law, in lieu of providing the Record, provided Respondent complies with Paragraph 35.b, and except as provided in Paragraph 35.c.

b. If Respondent asserts a claim of privilege or protection, it shall provide EPA with the following information regarding such Record: its title; its date; the name, title, affiliation (e.g., company or firm), and address of the author, of each addressee, and of each recipient; a description of the Record's contents; and the privilege or protection asserted. If a claim of privilege or protection applies only to a portion of a Record, Respondent shall provide the Record to EPA in redacted form to mask the privileged or protected portion only. Respondent shall retain all Records that it claims to be privileged or protected until EPA or a court determines that such Record is privileged or protected.

c. Respondent may make no claim of privilege or protection regarding:
(1) any data regarding the Site, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, radiological, or engineering data, or the portion of any other Record that evidences conditions at or around the Site; or (2) the portion of any Record that Respondent is required to create or generate pursuant to this Order.

36. **Business Confidential Claims.** Respondent may assert that all or part of a Record provided to EPA under this Section or Section XV (Retention of Records) is business confidential to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Respondent shall segregate and clearly identify all Records or parts thereof submitted under this Order for which Respondent asserts business confidentiality claims. Records that Respondent claims to be confidential business information will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies Records when they are submitted to EPA, or if EPA has notified Respondent that the Records are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such Records without further notice to Respondent.

37. Notwithstanding any provision of this Order, EPA retains all of its information gathering and inspection authorities and rights, including enforcement actions related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

XV. RETENTION OF RECORDS

38. During the pendency of this Order and for a minimum of ten (10) years after Respondent's receipt of EPA's notification pursuant to Section XXIV (Notice of Completion of Work), Respondent shall preserve and retain all non-identical copies of Records (including Records in electronic form) now in its possession or control, or that come into its possession or control, that relate in any manner to its liability under CERCLA with respect to the Site and all Records that relate to the liability of any other person under CERCLA with respect to the Site. Respondent must also retain, and instruct its contractors and agents to preserve, for the same period of time specified above, all non-identical copies of the last draft or final version of any Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to the performance of the Work, provided, however, that Respondent (and its contractors and agents) must retain, in addition, copies of all data generated during performance of the Work and not contained in the aforementioned Records required to be retained. Each of the above record retention requirements shall apply regardless of any corporate retention policy to the contrary.

39. At the conclusion of this document retention period, Respondent shall notify EPA at least ninety (90) days prior to the destruction of any such Records, and, upon request by EPA, and except as provided in Paragraph 35, Respondent shall deliver any such Records to EPA.

40. Within thirty (30) days after the Effective Date, Respondent shall submit a written certification to EPA that, to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed, or otherwise disposed of any Records (other than identical copies) relating to its potential liability regarding the Site since notification of its potential liability by the United States, and that it has fully complied with any and all EPA requests for information regarding the Site pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927. If Respondent is unable to so certify it shall submit a modified certification that explains in detail why it is unable to certify in full with regard to all Records. . Such written certification shall be sent to:

Joanne Marinelli (3HS62)
Chief, Cost Recovery Branch
Hazardous Site Cleanup Division
U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103

XVI. COMPLIANCE WITH OTHER LAWS

41. Nothing in this Order limits Respondent's obligations to comply with the requirements of all applicable state and federal laws and regulations, except as provided in Section 121(e) of CERCLA, 42 U.S.C. § 9621(e), and 40 C.F.R. §§ 300.400(e) and 300.415(j). In accordance with 40 C.F.R. § 300.415(j), all on-site actions required pursuant to this Order shall, to the extent practicable, as determined by EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements ("ARARs") under federal environmental or state environmental or facility siting laws.

42. No local, state, or federal permit shall be required for any portion of the Work conducted entirely on-site (i.e., within the areal extent of contamination or in very close proximity to the contamination and necessary for implementation of the Work), including studies, if the action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621. Where any portion of the Work that is not on-site requires a federal or state permit or approval, Respondent shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals. This Order is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XVII. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASES

43. **Emergency Response.** If any event occurs during performance of the Work that causes or threatens to cause a release of any Waste Material on, at, or from the Site that either constitutes an emergency situation or that may present an immediate threat to public health or

welfare or the environment, Respondent shall immediately take all appropriate action to prevent, abate, or minimize such release or threat of release. Respondent shall take these actions in accordance with all applicable provisions of this Order, including, but not limited to, the Health and Safety Plan. Respondent shall also immediately notify the OSC or, in the event of his/her unavailability, the Regional Duty Officer at (215) 814-3255 of the incident or Site conditions. In the event that Respondent fails to take appropriate response action as required by this Paragraph, and EPA takes such action instead, EPA reserves the right to pursue cost recovery.

44. **Release Reporting.** Upon the occurrence of any event during performance of the Work that Respondent is required to report pursuant to Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-To-Know Act (EPCRA), 42 U.S.C. § 11004, Respondent shall immediately verbally notify the OSC, or, in the event of his/her unavailability, the Regional Duty Officer at (215) 814-3255, and the National Response Center at (800) 424-8802. This reporting requirement is in addition to, and not in lieu of, the reporting required by CERCLA § 103 or EPCRA § 304.

45. For any event covered under this Section, Respondent shall submit a written report to EPA within seven (7) days after the onset of such event, setting forth the action or event that occurred and the measures taken, and to be taken, to mitigate any release or threat of release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release or threat of release.

XVIII. ENFORCEMENT/WORK TAKEOVER

46. Any willful violation, or failure or refusal to comply with any provision of this Order may subject Respondent to civil penalties of up to \$53,907 per violation per day, as provided in Section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1), and the Civil Monetary Penalty Inflation Adjustment Rule, 81 Fed. Reg. 43,091, 40 C.F.R. Part 19.4. In the event of such willful violation, or failure or refusal to comply, EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606. Respondent may also be subject to punitive damages in an amount up to three times the amount of any costs incurred by the United States as a result of such failure to comply, as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3).

XIX. RESERVATIONS OF RIGHTS BY EPA

47. Nothing in this Order shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants, or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing in this Order shall prevent EPA from seeking legal or equitable relief to enforce

the terms of this Order, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondent in the future to perform additional activities pursuant to CERCLA or any other applicable law. EPA reserves the right to bring an action against Respondent under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order or the Site.

XX. OTHER CLAIMS

48. By issuance of this Order, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent. The United States or EPA shall not be deemed a party to any contract entered into by Respondent or its directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Order.

49. Nothing in this Order constitutes a satisfaction of or release from any claim or cause of action against Respondent or any person not a party to this Order, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

50. Nothing in this Order shall be deemed to constitute preauthorization of a claim within the meaning of Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2), or 40 C.F.R. § 300.700(d).

51. No action or decision by EPA pursuant to this Order shall give rise to any right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XXI. MODIFICATION

52. The OSC may make modifications, to accomplish the work required by this Order, to any plan or schedule in writing or by verbal direction. Any verbal modification will be memorialized in writing by EPA within fifteen (15) days, but shall have as its effective date the date of the OSC's verbal direction. Any other requirements of this Order may be modified in writing by signature of the Director of the Hazardous Sites Cleanup Division, EPA Region III.

53. If Respondent seeks permission to deviate from any approved Work Plan or schedule, Respondent's Project Coordinator shall submit a written request to EPA for approval outlining the proposed modification and its basis. Respondent may not proceed with the requested deviation until receiving approval from the OSC pursuant to Paragraph 52.

54. No informal advice, guidance, suggestion, or comment by the OSC or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted

by Respondent shall relieve Respondent of its obligation to obtain any formal approval required by this Order, or to comply with all requirements of this Order, unless it is formally modified.

XXII. DELAY IN PERFORMANCE

55. Respondent shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone and email to the OSC within forty-eight (48) hours after Respondent first knew or should have known that a delay might occur. Respondent shall adopt all reasonable measures to avoid or minimize any such delay. Within seven (7) days after notifying EPA by telephone and email, Respondent shall provide to EPA written notification fully describing the nature of the delay, the anticipated duration of the delay, any justification for the delay, all actions taken or to be taken to prevent or minimize the delay or the effect of the delay, a schedule for implementation of any measures to be taken to mitigate the effect of the delay, and any reason why Respondent should not be held strictly accountable for failing to comply with any relevant requirements of this Order. Increased costs or expenses associated with implementation of the activities called for in this Order is not a justification for any delay in performance.

56. Any delay in performance of this Order that, in EPA's judgment, is not properly justified by Respondent under the terms of Paragraph 55 shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondent's obligations to fully perform all obligations under the terms and conditions of this Order.

XXIII. ADDITIONAL REMOVAL ACTIONS

57. If EPA determines that additional removal actions not identified in Paragraph 18 are necessary to protect public health, welfare, or the environment, EPA will notify Respondents of that determination and will either modify this Order or issue a new Order to address any additional removal actions.

XXIV. NOTICE OF COMPLETION OF WORK

58. When EPA determines, after EPA's review of the final report, that all Work has been fully performed in accordance with this Order, with the exception of any continuing obligations required by this Order, including Record Retention, EPA will provide written notice to Respondent. If EPA determines that any Work has not been completed in accordance with this Order, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modify the Removal Work Plan, if appropriate, in order to correct such deficiencies within thirty (30) days after receipt of the EPA notice. The modified Removal Work Plan shall include a schedule for correcting such deficiencies. Within ten (10) days after receipt of written approval of the modified Removal Work Plan, Respondent shall implement the modified and approved Removal Work Plan and shall submit a modified Final Report in accordance with the

EPA notice. Failure by Respondent to implement the approved modified Removal Work Plan shall be a violation of this Order.


XXV. ADMINISTRATIVE RECORD

59. EPA has established an Administrative Record ("AR") that contains the documents that form the basis for the issuance of this Order. The AR is available for review by appointment on weekdays between the hours of 9 A.M. and 4 P.M. at the EPA Region III office located at 1650 Arch Street, 6th Floor Administrative Record Reading Room, Philadelphia, PA 19103. To review the administrative record, contact Paul Van Reed at (215) 814-3024 to make an appointment. The AR is also available online at <https://semspub.epa.gov/src/collection/03/AR65088>.

XXVI. SEVERABILITY

60. If a court issues an order that invalidates any provision of this Order or finds that Respondent has sufficient cause not to comply with one or more provisions of this Order, Respondent shall remain bound to comply with all provisions of this Order not invalidated or determined to be subject to a sufficient cause defense by the court's order.

IT IS SO ORDERED.



Karen Melvin, Director
Hazardous Sites Cleanup Division
U.S. Environmental Protection Agency
Region III

Date: MAY 31 2017

Chem-Fab Superfund Site: Doylestown, Bucks County, Pennsylvania
Administrative Order for Removal Response Action
EPA No. CERC-03-2017-014-DC

ATTACHMENT 1

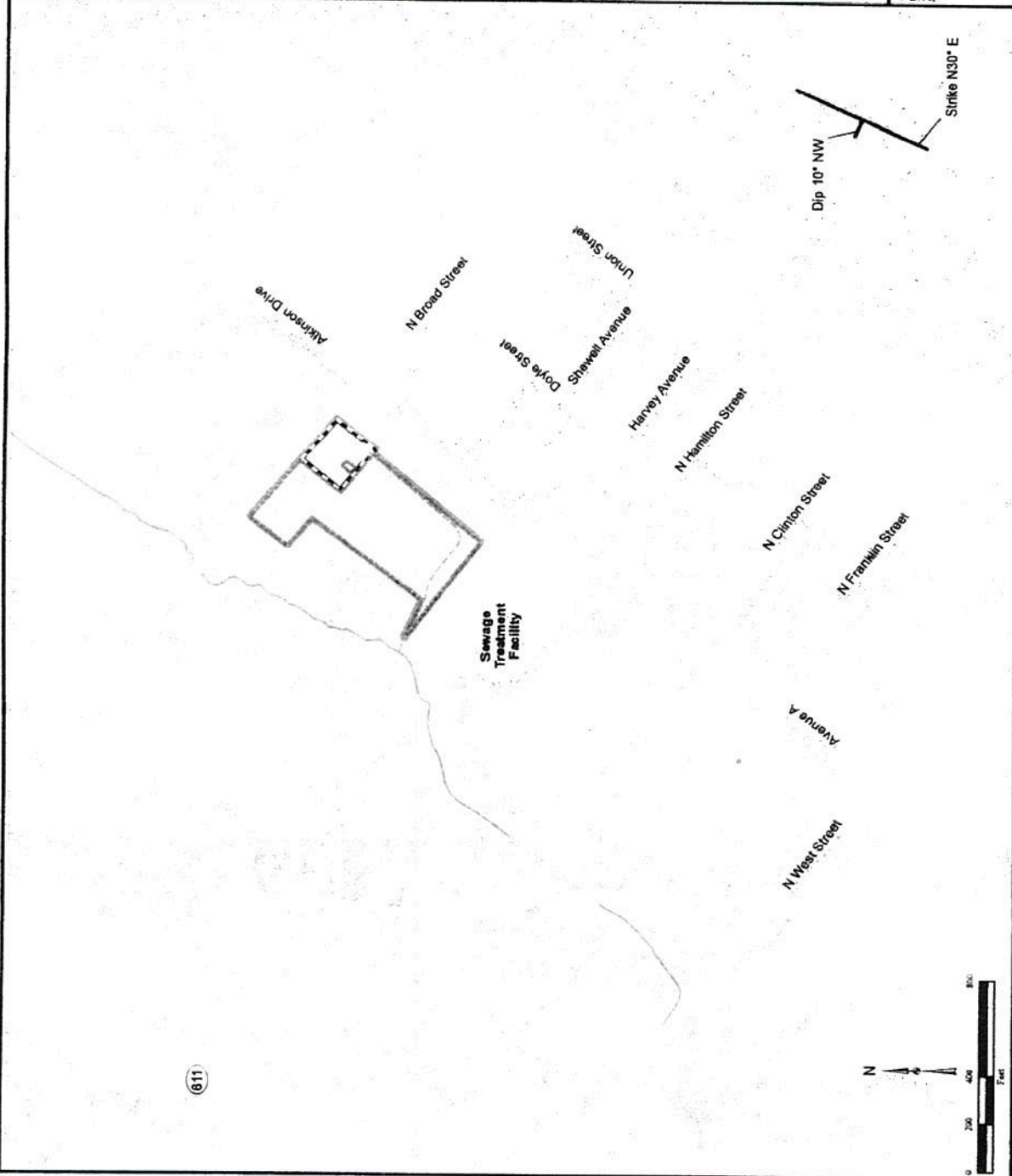
Figure 1
Site Layout

Legend

- Drainage Ditch
- Creek
- Former 10,000-Gallon UST
- Former AST Farm
- Area of Highest Groundwater Concentration (AOHC)
- Former Chem-Fab Facility
- Extra Space Storage Facility

Notes
Bedrock fracture sets strike from northeast to southwest (approximately N30°E), with a dip of approximately 10 degrees to the northwest.
AST—aboveground storage tank
UST—underground storage tank

PHOTO: JACQUES/PA-PAK, 10/11/95.
Aerial Photo, 1994
Aerial Photo, 1988
Aerial Photo, 1982
Aerial Photo, 1976
Aerial Photo, 1970



(811)

Chem-Fab Superfund Site: Doylestown, Bucks County, Pennsylvania
Administrative Order for Removal Response Action
EPA No. CERC-03-2017-014-DC

ATTACHMENT 2

300-330 NORTH BROAD ST.,
DOYLESTOWN, PA

ACTIVE SOIL DEPRESSURIZATION
SYSTEM REPORT

For

NorthStar Federal Services, Inc.
55 Progress Place, Unit 1
Jackson, NJ 08527

By

WPB Enterprises, Inc.
2844 Slifer Valley Rd.
Riegelsville, PA 18077
610 346-8004

ywbroadhead@gmail.com www.WPB-Radon.com

1.0 System Description

The 300-330 Broad St., Doylestown building will hereafter be referred to as Chem-Fab. Chem-Fab is a slab on grade structure about 150 feet long by 75 feet wide, covering about 10,200 square feet. The building is occupied by six tenants. Each of the occupied units has finished floor coverings that limit the access to check sub-slab communication and to install a vapor intrusion mitigation (VIM) system. Different areas of the building are identified by either their street number or the type of business occupying the space. See Figure 1 and Figure 2

A sub-slab depressurization system was determined to be the most appropriate way to reduce occupant exposure to chemicals under the slab. Sub-slab communication testing was performed at eight different locations in the building. The test results indicated limited pressure field extension with varying requirements. Nine separate systems were installed with a total of 15 suction points. Two styles of fans were used a high flow AMG Fury fan and a high vacuum GBR76SOE fan. The GBR76SOE fan had the advantage of being able to adjust the fan voltage to allow the system to be optimized for system effectiveness and system efficiency.

During the installation the soil in System Eight suction pit was wet clay. After the system was activated the fan at System Eight started exhausting water. The suction pit was relocated closer to an existing sump pit. The new suction pit was dry just below the bottom of the slab where the suction piping was re-routed to. The sump pump in the pit outside was replaced with a unit that had a lower water table set point to assure there would be good drainage from the under slab to the pit.



Figure 1: Chem-Fab over view

2.0 Sub-Slab Depressurization System Installation & Maintenance

The Chem-Fab VIM system consisted of ten separate fan systems. Each system had piping routed from the fan to one to three suction pits. The fans all exhaust above the existing roof. Typical fan installation detail for the GBR76 SOE fans is depicted in Figure 4, 5 and 6. Table 1 lists all the fans

System #	Fan	Fan Wattage	Fan Location	Number Suctions	CFM	Mag	Suction Type
Sys #1	Festa Fury	138	Outside	2	136	-1.3"	Fig 6
Sys #2	GBR76 SOE	240	Roof	2	67	-10.0"	Fig 4
Sys #3	Festa Fury	138	Roof	2	133	-1.5"	Fig 4
Sys #4	GBR76 SOE	210	Roof	2	33	-9.5"	Fig 4
Sys #5	Festa Fury	138	Roof	2	139	-1.25"	Fig 4
Sys #6	GBR76 SOE	288	Outside	1	106	-4.0"	Fig 6
Sys #7	GBR76 SOE	252	Outside	1	96	-3.5"	Fig 6
Sys #8	GBR76 SOE	294	Outside	1	112	-3.5"	Fig 6
Sys #9	GBR76 SOE	102	Outside	1	82	-2.0"	Fig 6
Sys #10	GBR76 SOE	180	Outside	2	90	-5.0"	Fig 6

Table 1: System Fan List

The fan electrical usage is approximately 876 Kw/hrs per 100 watts of fan consumption. If the current electrical utility rate is about \$ 0.15 / Kw/hr, the year long cost for each 100 watts of fan electrical consumption would be \$131.40 per year or about \$10.95 per month. The total wattage is about 2000 watts or \$219 per month at \$ 0.15 / Kw/hr rate.

System maintenance is to twice a year check the magnehelic gauges to determine if reading is within 25% of their initial vacuum reading. Note that there can be some variation in the magnehelics reading due to periods of rain that saturate the soil and reduce system airflow which would increase the vacuum reading. Within a few days after the rain period the magnehelic gauge readings should return to their original vacuum reading.

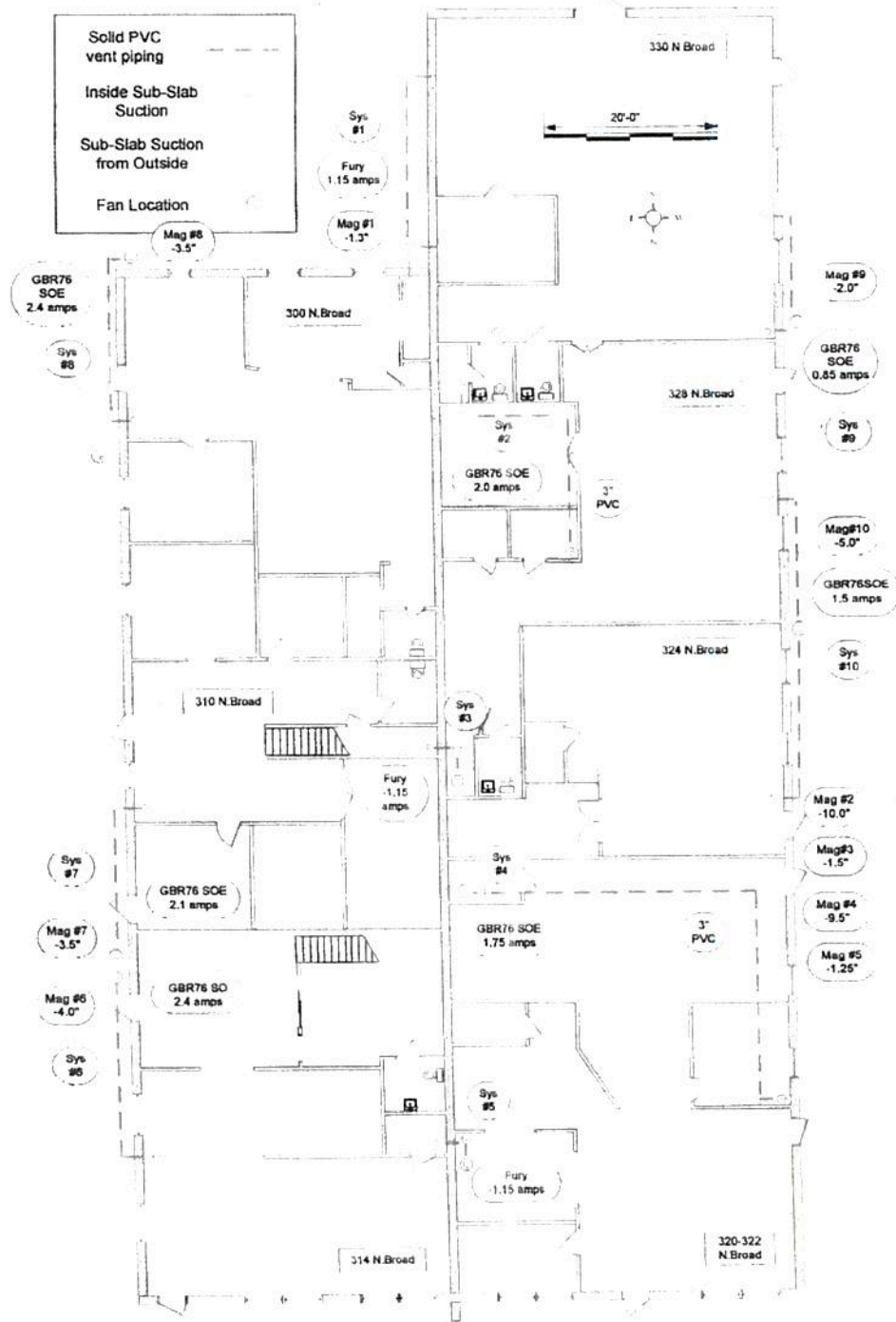


Figure 2: Mitigation System as built Layout

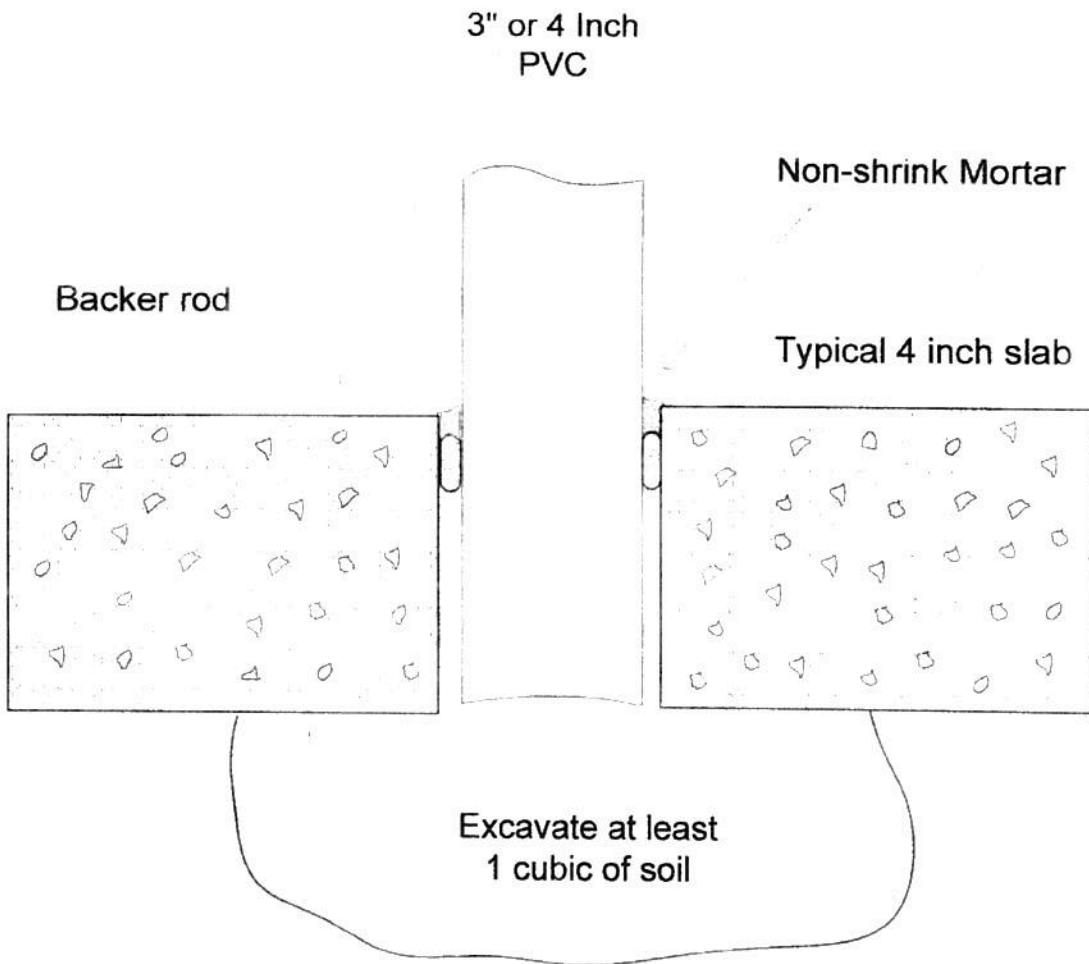


Figure 3: Detail of Sub-Slab Suction

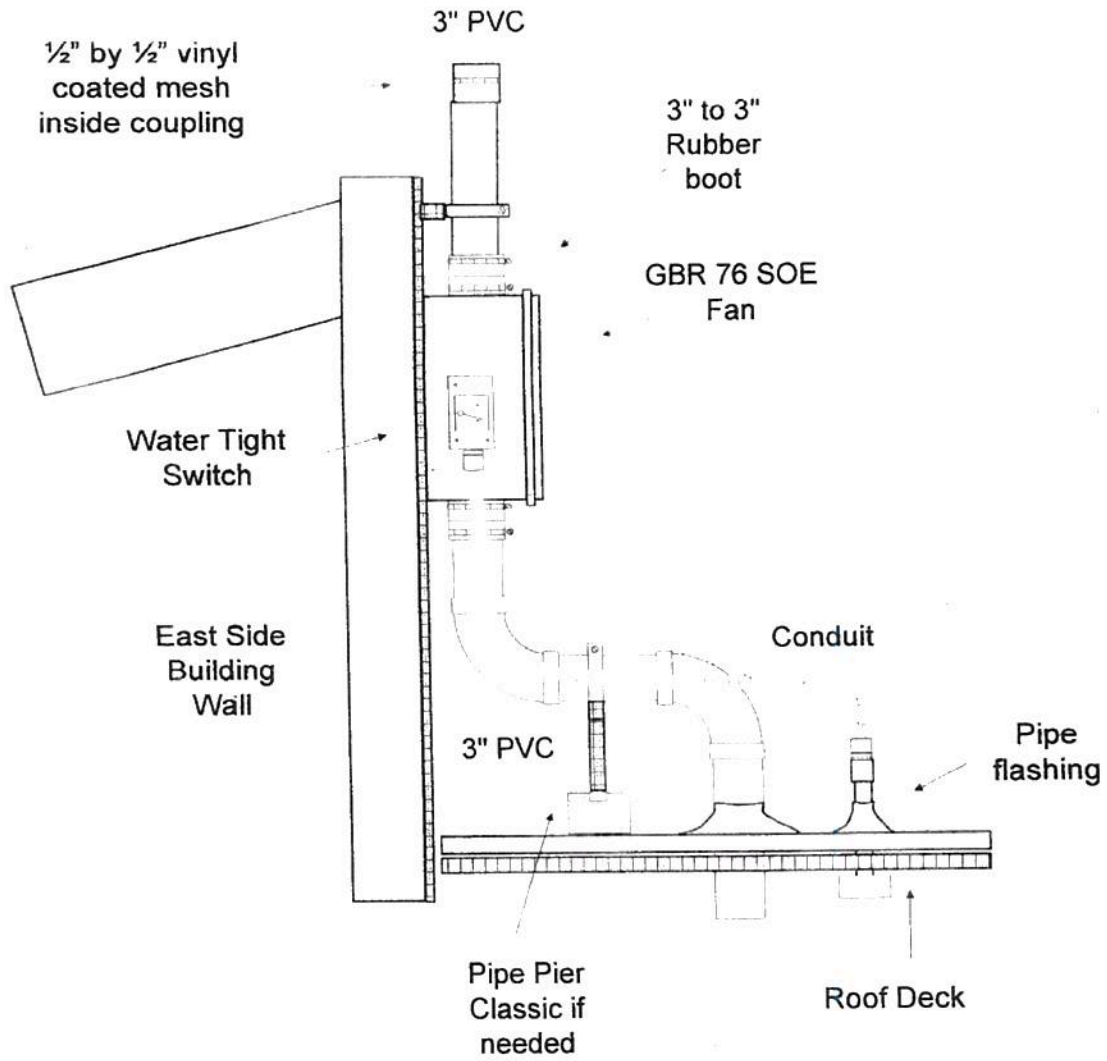


Figure 4: GBR76 SOE Roof Mount Details

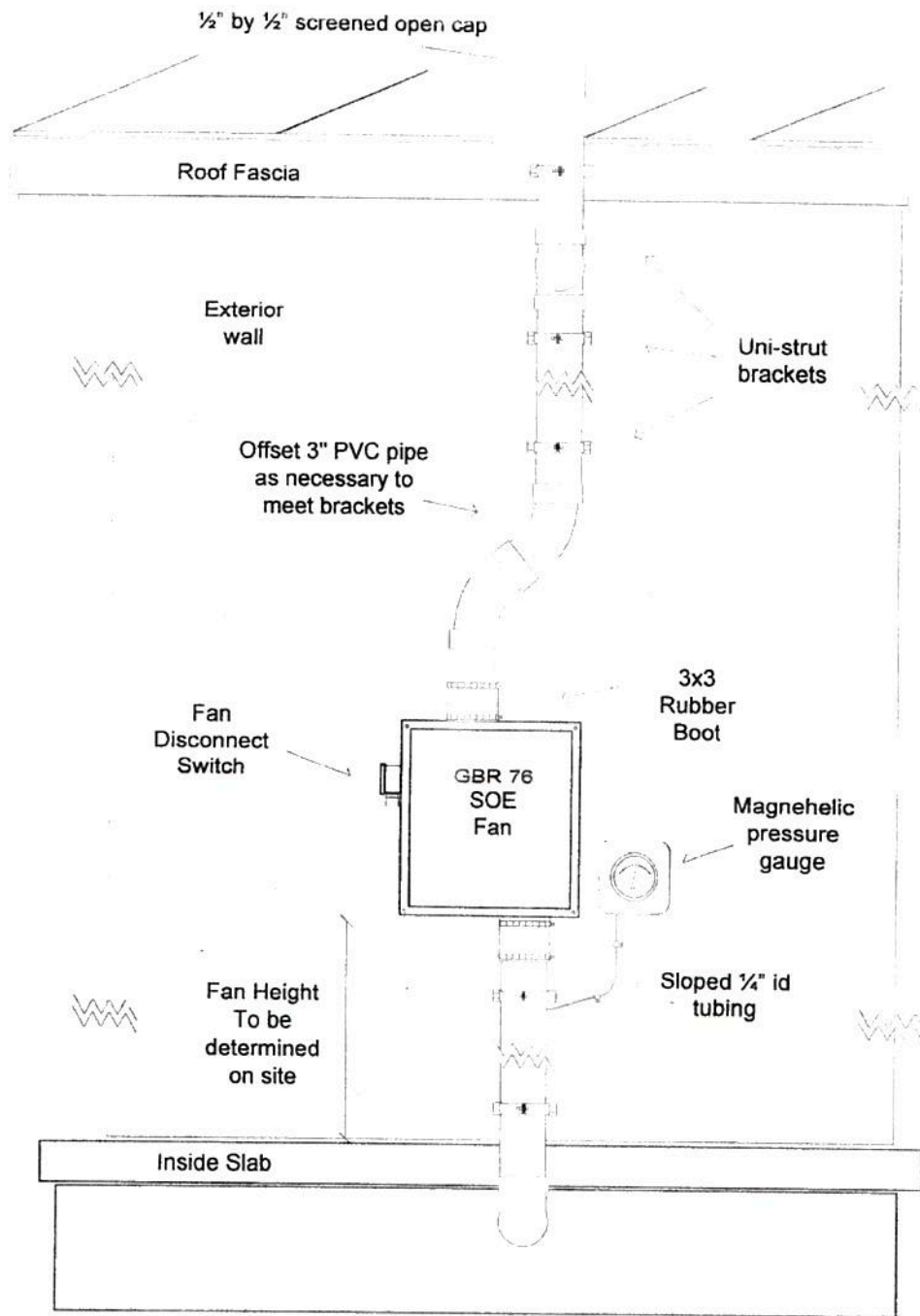


Figure 5: Front Detail of East Side Outside Fan

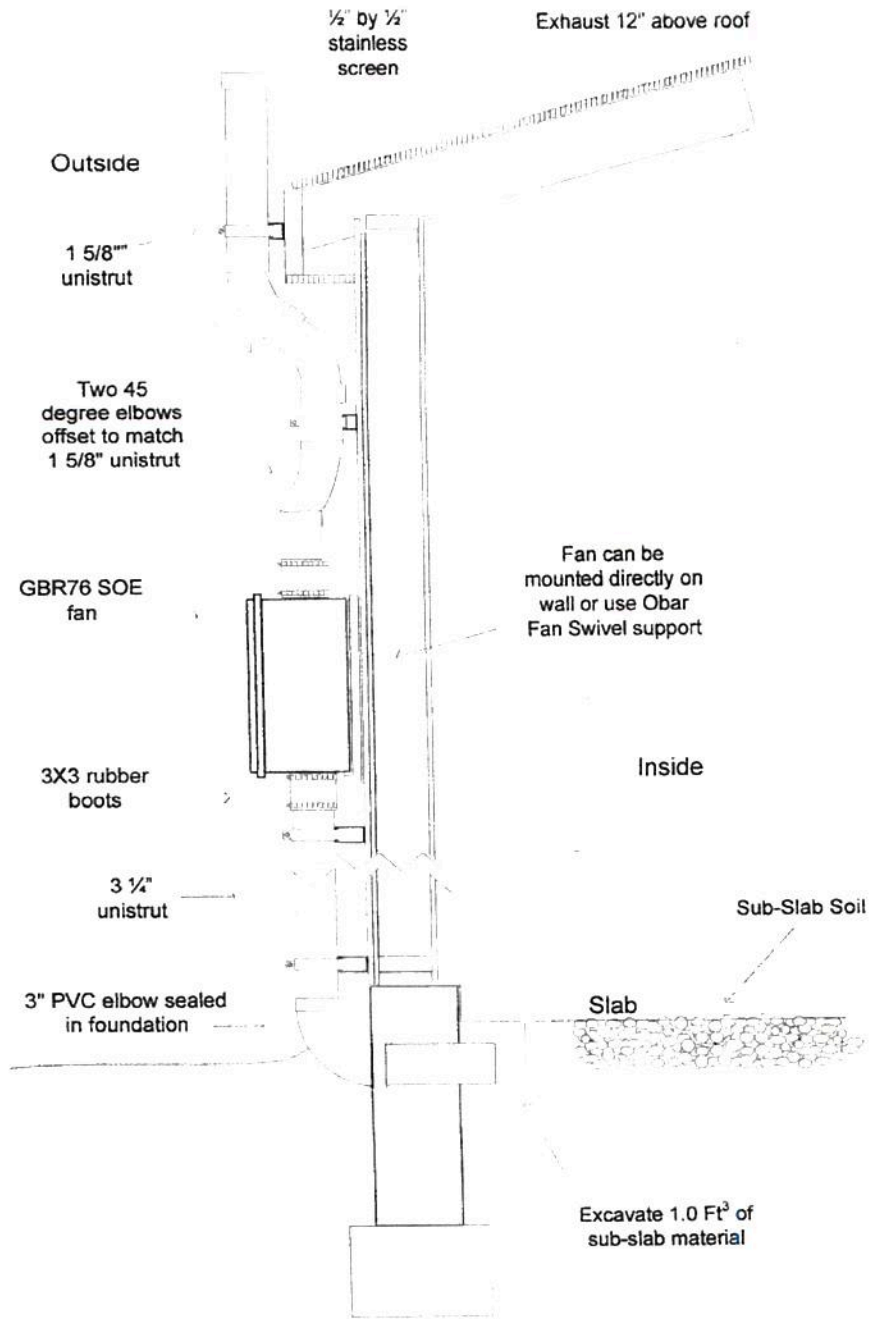


Figure 6: Side Detail of East Side Outside Fan

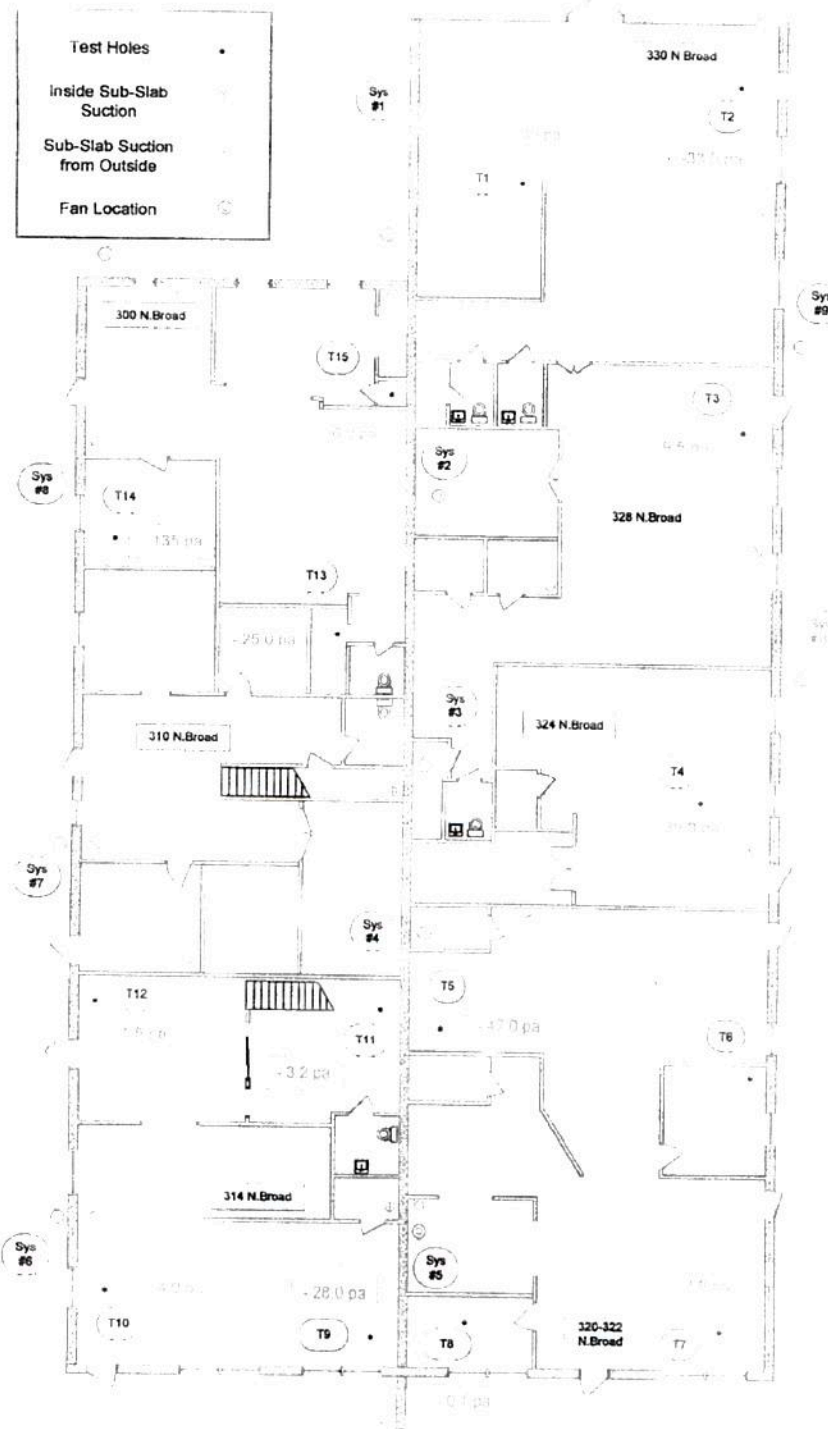


Figure 7: Sub-Slab Vacuum

Test Hole	Sub-Slab Vacuum
T1	- 39.0 pa / - 0.156"
T2	- 38.0 pa / - 0.152"
T3	- 9.5 pa / - 0.038"
T4	- 29.0 pa / - 0.116"
T5	- 47.0 pa / - 0.188"
T6	- 5.2 pa / - 0.021"
T7	- 3.8 pa / - 0.015"
T8	- 0.1 pa / - 0.0004"
T9	- 28.0 pa / - 0.112"
T10	- 4.0 pa / - 0.016"
T11	- 3.2 pa / - 0.013"
T12	- 1.5 pa / - 0.006"
T13	- 25.0 pa / - 0.100"
T14	- 135.0 pa / - 0.006"
T15	- 0.8 pa / - 0.003"

Table 8: Final Sub-Slab Vacuum

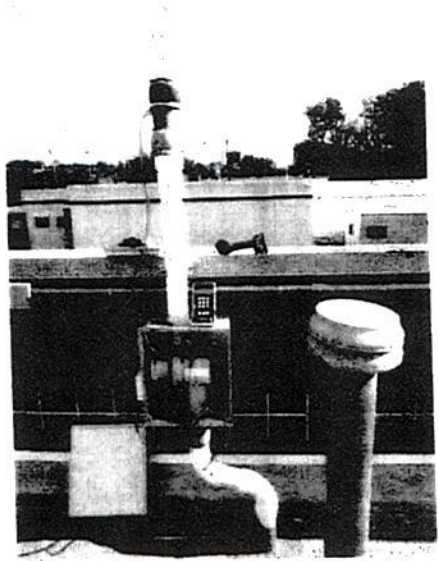


Figure 8: Measuring System Airflow & Amperage

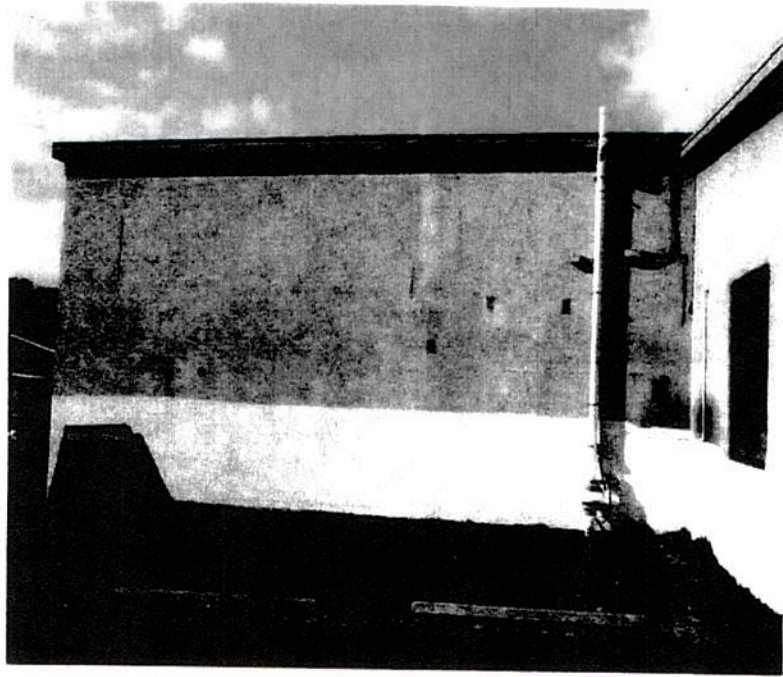


Figure 9: System One

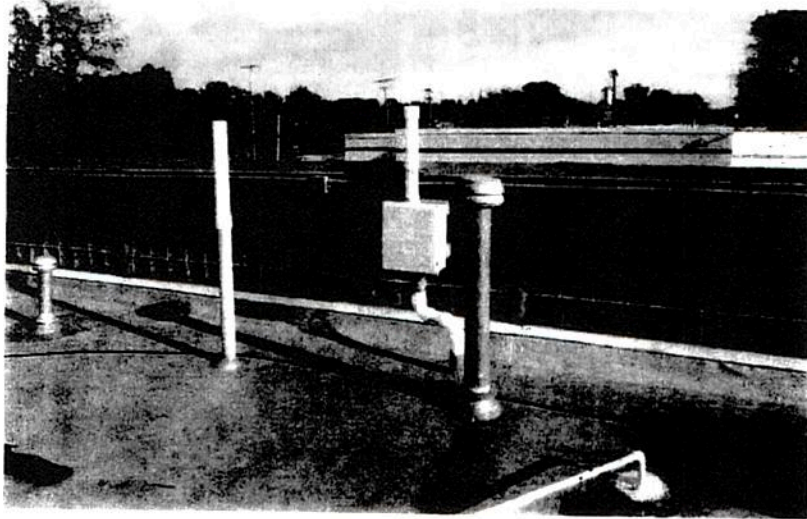


Figure 10: System Four

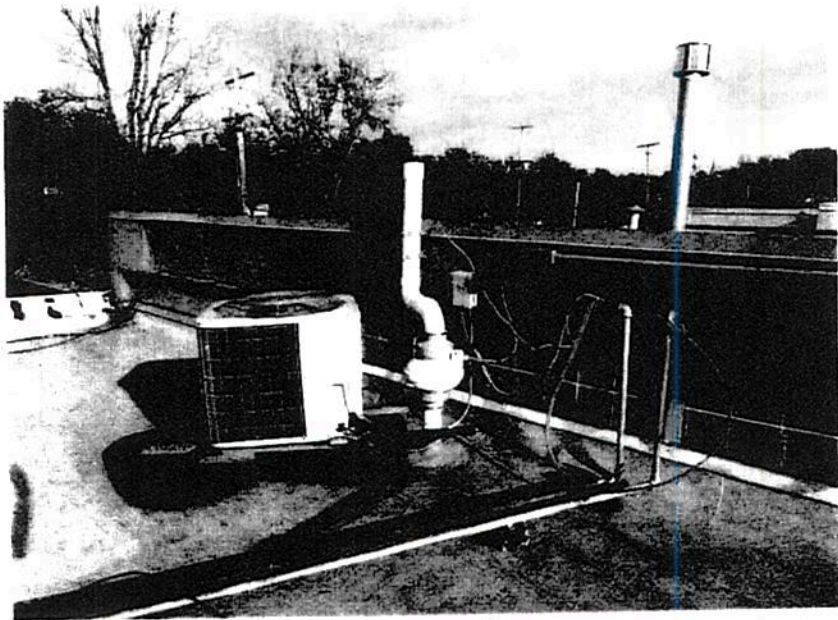


Figure 11: System Five

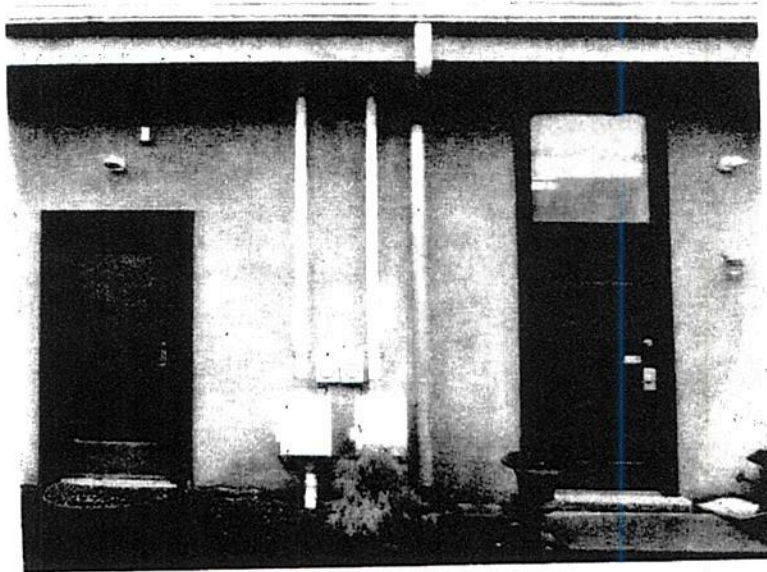


Figure 12: System Six and Seven

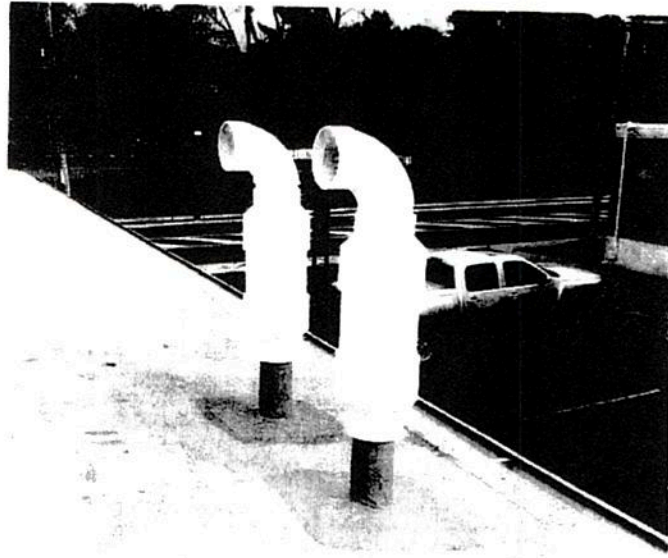


Figure 13: System Six and Seven Mufflers

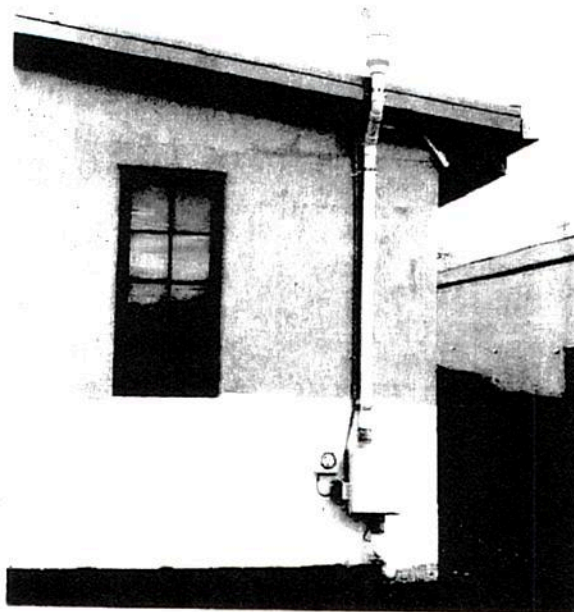


Figure 14: System Eight



Figure 15: System Nine

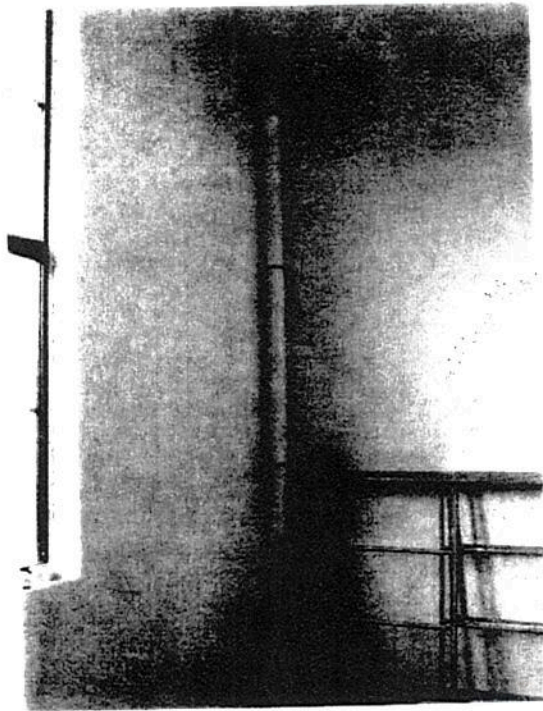


Figure 16: System Nine pipe routed through interior to roof

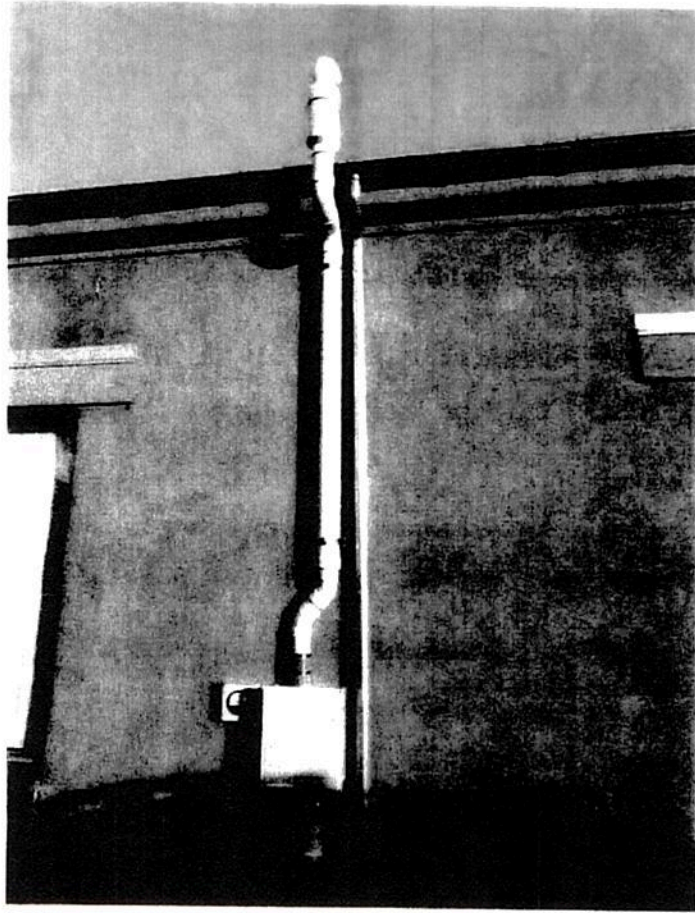


Figure 17: System Ten

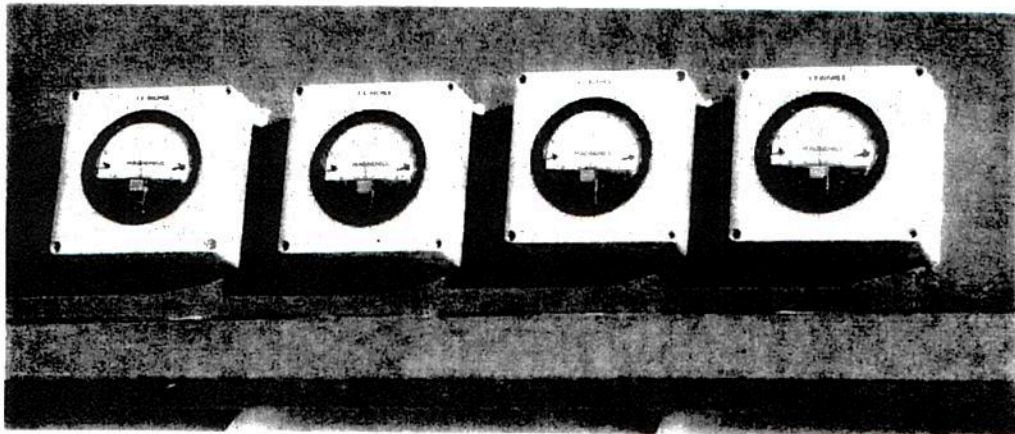


Figure 18: System Two, Three, Four, Five gauges

THE OBAR COMPACT RADIAL



GBR76 BLOWER

Based on 25 years of experience and 2 years of research and development, the patent pending GBR series of compact radial blowers provide the perfect combination of performance and design.

PERFORMANCE

- GBR76 SOE 16" WC @ 0 Max flow 155 CFM.
- GBR76 UD 40" WC @ 0 Max flow 195 CFM.
- Built in speed control to customize performance.
- Condensate bypass built in.
- 12 month warranty 40,000 hr sealed bearings.

DESIGN

- Our modular design means the blower and manifold assembly can be removed and replaced as a unit.
This makes repairs cost effective and easy and allows contractors to upgrade systems simply by swapping assemblies.
- The GBR series is based on a bypass blower designed to handle combustible materials. The housing is not required to be air tight so you can add gauges and alarms without compromising the system.
 - Built in condensate bypass.
 - Built in speed control.
 - Quick disconnect electrical harness.
 - All UL listed components including UL listed enclosure for outside use.
 - Wall fastening lugs included.
 - GBR series roof and wall mounts available to quickly configure the blowers for your installation while
 - providing a custom built look.
 - Compact design 16"x 14"x 8" weighing only 18 lbs.
 - 3" schedule 40 inlet and exhaust.
 - Universal Drive accepts voltage from 120-240V without alteration

Wattage 150-320 @ 16" WC, 110-200 @ 12" WC, 60-120 @ 8" WC, 37-50 @ 4" WC
Blower Specifications

Installation & Wiring Instructions for AMG In Line Centrifugal Duct Fans



Model: AMG Spirit, Fury, Legend, Hawk, Maverick,
Prowler, Eagle



IMPORTANT NOTE : DO NOT CONNECT THE POWER SUPPLY UNTIL THE FAN IS COMPLETELY INSTALLED.
MAKE SURE THE ELECTRICAL SERVICE TO THE FAN IS LOCKED IN "OFF" POSITION.

PLEASE READ AND SAVE THESE INSTRUCTIONS :

Warning – To reduce the risk of fire, electric shock or injury to persons, observe the following.

1. This unit is only for use in the manner intended by the manufacturer. If you have any questions contact the manufacturer Festa Manufacturing Enterprises LLC.
2. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
3. Sufficient air is needed for proper combustion and exhausting of gases through the flue, (chimney) of fuel burning equipment to prevent back drafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
4. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
5. Ducted fans must always be vented to the outdoors.
6. These units can be mounted indoors or outdoors.
7. Do not use these fans with solid state speed controllers.
8. The electric motor is protected by an internal overheat device to prevent/minimize motor damage. If the motor stops working, immediate inspection should be carried out by suitably qualified persons.
9. Before servicing or cleaning the unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
10. Do not use in a window.
11. If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application and be connected to a GFCI (Ground Fault Circuit Interrupter) – protected branch circuit.
12. Never place a switch where it can be reached from a tub or shower.
13. CAUTION: For General Ventilating Use Only. Do Not use to Exhaust Hazardous Or Explosive Materials and Vapours.
12. CAUTION: This unit has an unguarded impeller. Do Not Use in Locations Readily Accessible To People or Animals.

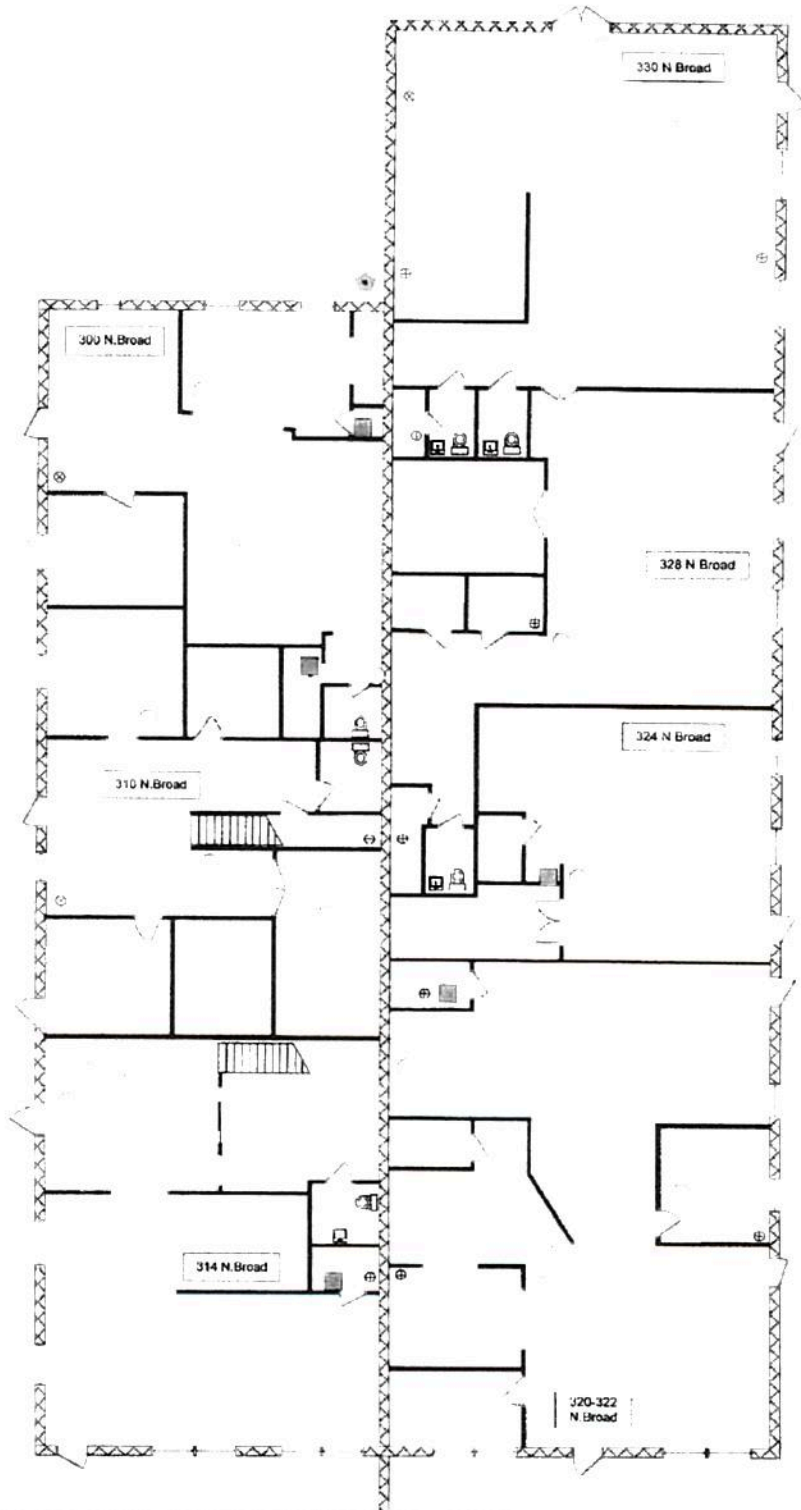
Installation of FME AMG PATRIOT Radon Fans.

The FME AMG PATRIOT Fan can be mounted indoors or outdoors. We suggest that EPA recommendations be used in choosing the fan location. The AMG Fans may be mounted directly onto the piping system or fastened to a supporting structure. When mounting directly onto a vertical piping system, it is the installers responsibility to make provision to prevent the pipe system sliding into and onto the fan motor and impeller. When installing a system with short duct runs terminating close to the fan i.e. within 60" (1.5m) suitable guards should be incorporated. It is the responsibility of the installer to ensure that all aspects of the system are taken into consideration. Rigid ducting sections should be connected to fan spigots by flexible connectors and clips. The flexible connectors used should be suitable for routine servicing and vibration isolation.

Figure 20: Festa AMG Fury Fan Warranty

Chem-Fab Superfund Site: Doylestown, Bucks County, Pennsylvania
Administrative Order for Removal Response Action
EPA No. CERC-03-2017-014-DC

ATTACHMENT 3



Legend

- Indoor Air
- Sub Slab
- Ambient



Chem-Fab Removal
Doylestown, Bucks County, Pennsylvania

Figure 3
Air Sampling Locations

TDD#: WS01-14-04-001
Contract: EP-53-15-02

Chem-Fab Superfund Site: Doylestown, Bucks County, Pennsylvania
Administrative Order for Removal Response Action
EPA No. CERC-03-2017-014-DC

ATTACHMENT 4

chemical_name

DICHLORODIFLUOROMETHANE

CHLOROMETHANE

Dichlorotetrafluoroethane

VINYL CHLORIDE

BROMOMETHANE

CHLOROETHANE

TRICHLOROFLUOROMETHANE

1,1-DICHLOROETHENE

CARBON DISULFIDE

1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE

ACETONE

METHYLENE CHLORIDE

TRANS-1,2-DICHLOROETHENE

1,1-DICHLOROETHANE

VINYL ACETATE

CIS-1,2-DICHLOROETHYLENE

METHYL ETHYL KETONE (2-BUTANONE)

TERT-BUTYL METHYL ETHER

CHLOROFORM

1,1,1-TRICHLOROETHANE

CARBON TETRACHLORIDE

BENZENE

1,2-DICHLOROETHANE

TRICHLOROETHYLENE (TCE)

1,2-DICHLOROPROPANE

BROMODICHLOROMETHANE

CIS-1,3-DICHLOROPROPENE

METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)

TOLUENE

TRANS-1,3-DICHLOROPROPENE

1,1,2-TRICHLOROETHANE

Tetrachloroethylene (PCE)

2-HEXANONE

DIBROMOCHLOROMETHANE

1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)

CHLOROBENZENE

ETHYLBENZENE

M,P-XYLENE (SUM OF ISOMERS)

O-XYLENE (1,2-DIMETHYLBENZENE)

STYRENE

BROMOFORM

1,1,2,2-TETRACHLOROETHANE

BENZYL CHLORIDE

4-ETHYLTOLUENE

1,3,5-TRIMETHYLBENZENE (MESITYLENE)

1,2,4-TRIMETHYLBENZENE

1,3-DICHLOROBENZENE
1,4-DICHLOROBENZENE
1,2-DICHLOROBENZENE
1,2,4-TRICHLOROBENZENE
HEXACHLOROBUTADIENE
Propene
1,3-BUTADIENE
ETHANOL
ISOPROPANOL
N-HEXANE
ETHYL ACETATE
TETRAHYDROFURAN
CYCLOHEXANE
N-HEPTANE
1,4-DIOXANE (P-DIOXANE)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

VIA FIRST CLASS MAIL & EMAIL

JUL 19 2017

Turog Properties Limited
c/o Heywood Becker
Box 180
Carversville, PA 18913

**Re: Chem-Fab Corporation Superfund Site: Order Directing
Turog Properties Limited to Perform Work**

Dear Mr. Becker:

Enclosed please find Amendment No. 1 to the administrative order ("Order") issued by the U.S. Environmental Protection Agency ("EPA") directing Turog Properties Limited to perform certain work in connection with the Chem-Fab Superfund Site in Doylestown, Bucks County, Pennsylvania.

Amendment No. 1 suspends all obligations related to the planning and performance of annual sampling contained in the Order. EPA has issued this Amendment No. 1 to clarify Turog's obligations during the period of time necessary for EPA to evaluate the company's claim of inability to pay for performance such sampling. If EPA concludes that Turog is financially capable of performing such work, EPA may, among other things, further amend the Order to reinstate the sampling requirements.

Please contact EPA On Scene Coordinator Eduardo Rovira at (215) 814-3436 if you have any technical questions regarding the Order or have your attorney contact EPA Sr. Assistant Regional Counsel Andrew Goldman at (215) 814-2487 with any legal questions.

Sincerely,



Karen Melvin, Director
Hazardous Site Cleanup Division
EPA Region III

Enclosure

cc: Eduardo Rovira (3HS31)
Andrew Goldman (3RC41)

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III**

IN THE MATTER OF:	:	
	:	
CHEM-FAB SITE	:	
Doylestown, Pennsylvania	:	EPA Docket No. CERC-03-2017-014-DC
	:	
Turog Properties Limited,	:	
	:	
Respondent	:	
	:	
Proceeding Under Section 106(a)	:	
of the Comprehensive Environmental	:	
Response, Compensation, and	:	
Liability Act of 1980, as amended	:	
42 U.S.C. § 9606(a)	:	
	:	

**AMENDMENT NO. 1 TO ADMINISTRATIVE ORDER
FOR REMOVAL RESPONSE ACTION**

WHEREAS, on May 31, 2017, the U.S. Environmental Protection Agency (“EPA”) issued an Administrative Order for Removal Response Action (“Order”) pursuant to Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (“CERCLA”), 42 U.S.C. § 9606(a), to Turog Properties Limited (“Respondent”) in connection with the Chem-Fab Superfund Site (“Site”);

WHEREAS, the Order requires Respondent to perform certain actions to operate and maintain a Subslab Depressurization System (“Depressurization System”) installed by EPA in a commercial building (the “Building”) at Respondent’s Doylestown, Pennsylvania property which is included in the Site;

WHEREAS, the actions required by the Order include, among other things, annual sampling, in January or February of each year, of certain locations within the Building to monitor the continued effectiveness of the Depressurization System in lowering contaminant levels in the air within the Building to acceptable levels;

WHEREAS, by email and letter dated June 26, 2017, Respondent indicated that it was not financially capable of performing the annual sampling required by the Order;

WHEREAS, by letter dated July 10, 2017, EPA issued an information request pursuant to Section 104(e) of the CERCLA, 42 U.S.C. § 9604(e), seeking information relevant to Respondent’s claim of financial inability to perform the annual sampling required by the Order;

WHEREAS, EPA has not yet determined whether it agrees with Respondent's contention that it cannot afford to perform the annual sampling required by the Order;

WHEREAS, certain obligations under the Order will become due before EPA can fully evaluate Respondent's contention that it cannot afford to perform the annual sampling required by the Order;

WHEREAS, EPA believes that this Amendment No. 1 to the Order is necessary to ensure that Respondent understands what is currently required under the Order during the period of time necessary for EPA to evaluate Respondent's contention that it cannot afford to perform the annual sampling required by the Order; and

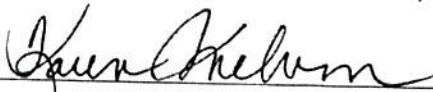
WHEREAS, Paragraph 52 of the Order authorizes modification of the Order by written signature of the Director of the Hazardous Site Cleanup Division, EPA Region III;

NOW THEREFORE, IT IS ORDERED AS FOLLOWS:

1. Unless and until the Order is further modified:
 - a. Respondent shall not be required to comply with Paragraph 18.c of the Order (relating to sampling);
 - b. Respondent shall not be required by Paragraph 14 of the Order (Selection of Contractors, Personnel) to identify contractors or subcontractors responsible for planning or performing activities required by Paragraph 18.c of this Order;
 - c. Respondent shall not be required to include the activities contemplated by Paragraph 18.c of the Order in the Removal Work Plan required to be submitted pursuant to Paragraph 20 of the Order; and
 - d. Respondent shall not be required to comply with Paragraph 22 (Sampling and Analysis Plan) of the Order.
2. No provisions, requirements, or obligations of the Order other than those expressly referred to in Paragraph 1 of this Amendment No. 1 shall be modified or amended hereby and all other such provisions, requirements, and obligations remain in full force and effect.

3. The effective date of this Amendment No. 1 shall be the date it is signed by EPA.

IT IS SO ORDERED.



Karen Melvin, Director
Hazardous Sites Cleanup Division
U.S. Environmental Protection Agency
Region III

Date: JUL 19 2017



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

VIA FIRST CLASS MAIL & EMAIL

NOV 16 2017

Turog Properties Limited
c/o Heywood Becker
P.O. Box 180
Carversville, PA 18913

**Re: Chem Fab Superfund Site: Administrative Order No.
CERC-03-2017-0140-DC**

Dear Mr. Becker:

The U.S. Environmental Protection Agency ("EPA") has reviewed your Work Plan, signed and dated October 20 and 23, 2017, which contained several handwritten changes to the previous draft. By this letter EPA disapproves your Work Plan and provides you with a modified Work Plan approved by EPA which is, pursuant to Paragraph 20.b of the Order, incorporated into and enforceable under the Order (Attachment 1). Please note the following:

1. In Paragraph 2.b.i of your draft Work Plan you added the words "if feasible" to modify the requirement that Turog replace inoperable fans within 48 hours of the time Turog becomes aware of an operational issue. Having considered your request, we conclude that compliance with the original timeframe would be difficult at best and agree to extend the deadline for fan replacement to 15 business days. Because the 48-hour requirement was expressly stated in the original Order, we have modified that Order (see Attachment 2) to reflect this change and have modified Paragraph 2.b.i of the Work Plan to incorporate it.¹
2. In Paragraph 3.c of your draft Work Plan you added the words "having been informed of the levels by the EPA" ostensibly to account for the fact that Turog is not presently required to conduct air sampling. We agree with the intent of your proposal but have instead added language making clear that "due diligence" does

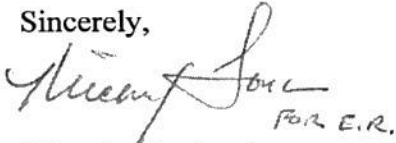
¹ In addition to extending the deadline for fan replacement, the attached amendment changes the docket number of this action to match the docket system EPA uses to track administrative orders.

not include sampling unless the Order requires Turog to sample.

As noted above, Turog is required under the Order to implement the Order and the enclosed EPA-approved Work Plan.

Should you have any questions, feel free to contact me at 215.514.6887 or by email (rovira.eduardo@epa.gov).

Sincerely,



Eduardo Rovira, Jr.
On-Scene Coordinator
EPA Region III
Hazardous Site Cleanup Division
Eastern Response Branch

Attachments: 1. Amendment No. 2
 2. EPA-Approved Work Plan

cc: Andrew Goldman (3RC41)

CHEM FAB SUPERFUND SITE

Doylestown, Bucks County, Pennsylvania

**Work Plan For Implementation of Administrative
Order For Removal Response Action**

(EPA Docket No. CERC-03-2017-014-DC)

Originally Submitted by Turog Properties Limited

Modified and Approved by EPA Pursuant to
Paragraph 20.b of the Order

Approved by EPA:



Eduardo Rovira, OSC

11-16-17
Date

ATTACHMENT 1

Chem-Fab Site Superfund Site
Work Plan For Implementation of Administrative Order For Removal Response Action
(EPA Docket No. CERC-03-2017-014-DC)

- 1) ***Operation of Depressurization System:*** Turog will ensure the Depressurization System runs continuously (24 hours per day, 7 days per week/365 days per year subject only to periodic maintenance and unanticipated power interruptions). Operational problems will be reported in Progress Reports to EPA.
- 2) ***Maintenance of Depressurization System:*** Turog will maintain the Depressurization System to ensure its continued effectiveness as follows:
 - a) Turog shall check each magnehelic gauge installed in the Depressurization System, including those installed by EPA and those that may be installed by EPA or by Turog in the future at a frequency no less than every seven (7) days, to determine whether each gauge reads within 25% of its initial vacuum reading which is posted on the gauge.
 - i) In the event one or more gauges are found to read outside its/their initial vacuum reading by 25% or more, Turog shall notify the EPA Project Coordinator within 48 hours of such finding(s).
 - ii) Turog shall comply with all EPA Project Coordinator requests for additional information/inspections for each gauge so identified.
 - b) Turog shall check each of the fans installed in the Depressurization System, including those installed by EPA and those that may be installed by EPA or Turog in the future at a frequency no less than every seven (7) days.
 - i) In the event one or more fans ceases operation completely, operates in a manner that does not keep its magnehelic gauge reading within 25% of the initial reading, or operates in a manner that evidences imminent failure (e.g., noisy operation), Turog shall, within fifteen (15) business days of becoming aware of such condition, replace such fan with a unit that has specifications that are substantially identical to those described for the fans in the Order and shall notify the EPA Project Coordinator within 48 hours after such replacement.
- 3) ***Notice of Changes to Existing Floorplans, Status of the Foundation, or Factors Which Cause Indoor VOC Levels to Exceed Acceptable Levels:*** Turog shall notify EPA of any construction at Building A or other event or condition which might have a negative impact on the operation of the installed depressurization system, including, but not limited to the items below:

Chem-Fab Site Superfund Site
Work Plan For Implementation of Administrative Order For Removal Response Action
(EPA Docket No. CERC-03-2017-014-DC)

- a) a significant change to the layout or size of any existing or future tenant space within Building A
 - b) damage to or penetration of the foundation of Building A
 - c) TCE levels at or above 8 ug/m³ within Building A.
Turog shall provide such notice no less than five (5) days after Turog becomes aware, or should have been aware through the exercise of due diligence, of such circumstances. As used here, due diligence shall not include sampling and analyses unless the Order requires that Turog perform such sampling and analyses.
- 4) **Access:** Turog provides access as required by Paragraph 30 of the Order.
 - 5) **Records:** Turog will maintain records, throughout the lifetime of this Order and 10 years thereafter, documenting all actions taken to comply with the Order including, but not limited to, records documenting the maintenance of the Depressurization System and changes to Building A triggering the notice requirement of Paragraph 18.d of the Order.
 - 6) **Progress Reports:** Turog shall submit written progress reports to EPA every 90 days concerning actions undertaken pursuant to the Order, including all actions taken to operate the system (e.g., payment of electricity), and all actions relating to system repair and maintenance, and all other events and circumstances required by Paragraph 25 of the Order. A sample Progress Report is attached as Exhibit 1 to this Attachment.
 - 7) **Final Report:** Turog shall, within thirty (30) days after EPA notifies Turog that the Depressurization System is no longer needed, submit for EPA review and approval a Final Report summarizing the actions taken to comply with this Order in accordance with Paragraph 26 of the Order.
 - 8) **Notice in Land Records:** Turog shall provide a draft notice to be filed in the land records in accordance with Paragraph 31 of the Order.
 - 9) **Land Transfer:** Turog shall provide notification to EPA of land transfers in accordance with Paragraph 31.b of the Order.

Chem-Fab Site Superfund Site
Work Plan For Implementation of Administrative Order For Removal Response Action
(EPA Docket No. CERC-03-2017-014-DC)

EXHIBIT 1

[SAMPLE PROGRESS REPORT]

PROGRESS REPORT
CHEM-FAB ORDER NO. CERC-03-2017-014-DC

Date	
From	Turog Properties Limited Heywood Becker, Project Coordinator
To	Eduardo Rovira, OSC
Project	Chem-Fab Superfund Site
Progress Report No.	
Period Covered	

In accordance with Paragraph 25 of the above-described Administrative Order, I, Heywood Becker, Project Coordinator, do hereby submit the following Progress Report on behalf of Turog Properties Limited covering the above-described period.

1. Description of the actions taken toward achieving compliance with the Order
 - a. Turog Properties Limited read all gauges and all read within 25% of the initial vacuum (see attached Gauge Reading/Fan Function Log) . . . or
 - b. Turog Properties Limited read all gauges and the one(s) listed below was (were) not reading within 25% of the initial vacuum (see attached Gauge Reading/Fan Function Log).
 - i. Gauge(s) number ???
 - c. Turog Properties Limited confirmed that all fans and were functional (see attached Gauge Reading/Fan Function Log) . . . or
 - d. Turog Properties Limited checked all fans and the one(s) listed below was (were) not functional (see attached Gauge Reading/Fan Function Log).
 - i. Fan(s) number ???
2. Description of all activities scheduled for the next ?? calendar days
 - a. Read ten gauges.
 - b. Check all fans.
 - c. Continue to pay the electric bill.
3. Description of any problems encountered or anticipated
 - a. Gauge #? was reading outside the acceptable range . . . and/or
 - b. Fan #? was not working . . . or

Chem-Fab Site Superfund Site
Work Plan For Implementation of Administrative Order For Removal Response Action
(EPA Docket No. CERC-03-2017-014-DC)

- c. Not applicable
- 4. Any actions taken to prevent or mitigate such problems
 - a. Fixed and/or replace gauge and/or fan . . . or
 - b. Not applicable

Respectfully Submitted,

Heywood Becker
Project Coordinator
Turog Properties Limited

ATTACHMENT 2

Chem-Fab Site Superfund Site
 Work Plan For Implementation of Administrative Order For Removal Response Action
 (EPA Docket No. CERC-03-2017-014-DC)

Chem-Fab Superfund Site: Gauge Reading/Fan Function Log				
Fan Number	Reading	Within 25% of Initial Vacuum? (Y/N)	Fan Functional? (Y/N)	Comments
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
Date of Readings:				
Inspection By:				

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III**

IN THE MATTER OF: :
 :
CHEM-FAB SITE :
Doylestown, Pennsylvania : **EPA Docket No. CERC-03-2017-0140-DC**
 :
Turog Properties Limited, :
 :
Respondent :
 :
Proceeding Under Section 106(a) :
of the Comprehensive Environmental :
Response, Compensation, and :
Liability Act of 1980, as amended :
42 U.S.C. § 9606(a) :
 :

**AMENDMENT NO. 2 TO ADMINISTRATIVE ORDER
FOR REMOVAL RESPONSE ACTION**

WHEREAS, on May 31, 2017, the U.S. Environmental Protection Agency (“EPA”) issued an Administrative Order for Removal Response Action (“Order”) pursuant to Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (“CERCLA”), 42 U.S.C. § 9606(a), to Turog Properties Limited (“Respondent”) in connection with the Chem-Fab Superfund Site (“Site”);

WHEREAS, on July 19, 2017, EPA issued Amendment No. 1 to the Order which removed certain obligations relating to collection and analysis of samples;

WHEREAS, in the course of reviewing Respondent’s comments on a draft Removal Work Plan, EPA concluded that complying with the requirement, in Paragraph 18.b.2 of the Order, to replace inoperable fans within forty-eight (48) hours of Respondent’s discovery of the fans’ status would be difficult at best;

WHEREAS, the EPA docket number appearing on the Order and Amendment No. 1 needs to be changed to match EPA’s docket tracking system;

WHEREAS, Paragraph 52 of the Order authorizes modification of the Order by written signature of the Director of the Hazardous Site Cleanup Division, EPA Region III;

NOW THEREFORE, IT IS ORDERED AS FOLLOWS:

1. Paragraph 18.b.2 is struck and replaced with the following:

“No less frequently than once every ninety (90) days, check each of the fans installed in the Depressurization System, including those installed by EPA and those that may be installed by EPA or Respondent in the future. The ten fans installed by EPA are depicted in Figure 7 of Attachment 2. In the event one or more fans ceases operation completely, operates in a manner that does not keep its magnehelic gauge reading within 25% of the initial reading, or operates in a manner that evidences imminent failure (e.g., noisy operation), Respondent shall, within fifteen (15) business days of becoming aware of such condition, replace such fan with a unit that has specifications that are substantially identical to those described for the fans in Attachment 2 and shall notify the EPA Project Coordinator within 48 hours after such replacement.”

2. The EPA docket number on the Order and Amendment No. 1 shall be changed to “CERC-03-2017-0140-DC.”
3. No provisions, requirements, or obligations of the Order other than those expressly referred to in Paragraph 1 of this Amendment No. 2 shall be modified or amended hereby and all other such provisions, requirements, and obligations remain in full force and effect.
4. The effective date of this Amendment No. 2 shall be the date it is signed by EPA.

IT IS SO ORDERED.



Karen Melvin, Director
Hazardous Sites Cleanup Division
U.S. Environmental Protection Agency
Region III

Date: **NOV 15 2017**

**RECORD OF DECISION
FOR EARLY INTERIM REMEDIAL ACTION**

**CHEM-FAB SUPERFUND SITE
OPERABLE UNIT 2**

DOYLESTOWN, BUCKS COUNTY, PENNSYLVANIA



**U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION 3, PHILADELPHIA, PENNSYLVANIA
JULY 2017**

CHEM-FAB SUPERFUND SITE
 OPERABLE UNIT 2
 DOYLESTOWN BOROUGH, PENNSYLVANIA

RECORD OF DECISION

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Figure 5 January/February 2014 PCE Unconfined Overburden Groundwater Isoconcentration Contours

Figure 6 January/February 2014 PCE Unconfined Shallow Bedrock Groundwater Isoconcentration Contours

Figure 7 January/February 2014 PCE Semiconfined Bedrock Groundwater Isoconcentration Contours

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- Figure 11 Remedial Design Example Layout
- Figure 12 Alternative 2 Treatment Train Scenarios

I. DECLARATION

***CHEM-FAB SUPERFUND SITE
OPERABLE UNIT 2
EARLY INTERIM REMEDIAL ACTION***

DOYLESTOWN BOROUGH, BUCKS COUNTY, PENNSYLVANIA

RECORD OF DECISION FOR EARLY INTERIM REMEDIAL ACTION
CHEM-FAB
SUPERFUND SITE
OPERABLE UNIT 2

DECLARATION

Site Name and Location

Chem-Fab Superfund Site
Operable Unit 2
Doylestown Borough, Bucks County, Pennsylvania
CERCLIS ID Number PAD002323848

Statement of Basis and Purpose

This decision document presents the selected early interim remedial action for Operable Unit 2 ("OU2") of the Chem-Fab Superfund Site ("Site") located in Doylestown Borough, Bucks County, Pennsylvania (see Figure 1) which was chosen in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended ("CERCLA"), 42 U.S.C. §§ 9601 -9675, and the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 C.F.R. Part 300. This decision document explains the factual and legal basis for selecting the early interim remedial action for OU2 of the Site. The information considered or relied upon in making this decision is contained in an Administrative Record established in connection with the selected action. The Pennsylvania Department of Environment Protection ("PADEP") concurred with the selected remedy in a letter dated June 27, 2017.

Assessment of the Site

The early interim remedial action selected in this record of decision ("ROD") is necessary to protect the public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment.

Description of the Selected Remedy

The remedial action for OU2 described here is an early interim remedy and will be the second remedial action selected for the Site. Former electroplating and disposal operations conducted at the Site have resulted in residual contamination, mainly hexavalent chromium ("Cr[VI]") and volatile organic compounds ("VOCs"), in soil and groundwater.

The Site consists of a commercial property located at 300-360 N. Broad Street in Doylestown, Pennsylvania ("Property"), upon which industrial and disposal operations occurred in the past as well as other properties where contamination from such operations has migrated or otherwise come to be located. From approximately 2001 through the present, the Property has been used for commercial leasing of office space. EPA and the Commonwealth of Pennsylvania have

performed extensive investigations and a number of response actions at the Site, including the Property, since the 1980s, including the following:

- In August 1987, EPA performed a preliminary assessment focused on groundwater at the Site and detected VOCs in residential wells located in the vicinity of the Property. In October 1987, EPA conducted a removal action which included the delivery of bottled water and carbon filtration units to affected residences, and ultimately, the connection of affected residences to public water supplies.
- In September 1994, EPA performed a removal assessment at the Property and found improperly and incompatibly stored drums of hazardous materials, including flammable liquids and acids. Samples from these drums indicated the presence of VOCs and Cr[VI]. EPA also found a 50-foot underground storage tank (“UST”) which contained approximately 6,000 gallons of liquid and sludge and which appeared to be leaking. In 1994-1995, EPA conducted a second removal action to remove drums and wastes from the Property.
- Between 1998-2007, PADEP conducted investigations at the Site, including the Property, and found VOCs and metals in soils and groundwater at the Site.
- In September 2007, EPA proposed the Site to the CERCLA National Priorities List (“NPL”). The Site was finalized to the NPL in March 2008.
- In September 2009, EPA commenced a Fund-lead remedial investigation and feasibility study (“RI/FS”) at the Site. This study is ongoing.
- In late 2011 and early 2012, EPA collected subslab and indoor air samples from commercial buildings at the Property and determined that unacceptable levels of VOCs were migrating into office spaces in one of the buildings. In November 2012, EPA selected additional removal actions which resulted in the placement of air purifiers in several offices within the impacted building.
- In December 2012, EPA issued an Interim ROD for Operable Unit 1 (“OUI”), which selected excavation and disposal of contaminated soils outside the footprint of the buildings on the Property and backfilling the excavation with clean fill. This work was ultimately implemented in a removal action selected by EPA in 2014.
- In September 2015, EPA selected additional removal actions which resulted in the replacement of the air purifiers within the impacted building at the Property with a permanent subslab depressurization system.
- In September 2016, EPA finalized a focused feasibility study (“FFS”) to identify alternatives for an interim remedial action to address the most significant groundwater contamination at the Site. The FFS identifies alternatives for addressing risks presented by contaminated groundwater within the area of highest groundwater contamination (“AOHC”).

The selected early interim remedial action addresses the threat from contaminated groundwater within the AOHC. This contamination presents a risk of exposure via direct contact with the contaminated groundwater from a nearby drinking water well, exposure to surface water and sediments that have been contaminated by the groundwater and vapor intrusion from volatilization of contaminated groundwater. The goal of the action is to prevent further migration of contaminated groundwater from the AOHC, including migration to a nearby

drinking water well, and begin restoration of the groundwater to beneficial use by reducing volume of contaminated groundwater within the AOHC.

The selected early interim remedial action includes the following major components:

- Construction of an extraction/treatment system to extract groundwater from the AOHC to prevent further migration of contaminants within the AOHC from migrating outside the AOHC;
- Treatment of contaminated groundwater and discharge of treated groundwater to Cook's Run;
- Long-term monitoring.

Statutory Determinations

The selected early interim remedial action is protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to the remedial action ("ARARs") that are not waived, is cost-effective, and utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable.

The selected action is considered an "early" action because it is being selected prior to completion of the RI/FS at the Site. In addition, the selected remedy is an "interim action" because it is limited in scope and solely addresses areas or media that will also be addressed by a final ROD. This early interim remedial action will be consistent with the subsequent remedial actions which will address the remaining contaminated groundwater at the Site and other contaminated media.

Section 121(d)(4)(A) of CERCLA provides that EPA may select a remedial action that does not meet an applicable or relevant and appropriate standard, requirement, criteria, or limitation ("ARAR") if the remedial action is only part of a total remedial action that will attain such level or standard of control when completed. Because this remedial action is part of a total remedial action that will meet ARARs when completed, EPA is waiving, and this early interim remedial action will not meet, ARARs establishing groundwater cleanup standards. Specifically, EPA is waiving the requirement that Site groundwater meet Maximum Contaminant Levels ("MCLs") and non-zero Maximum Contaminant Level Goals ("MCLGs") established pursuant to the Safe Drinking Water Act, 42 U.S.C. §§ 300f et seq. These requirements are waived pursuant to the interim action waiver set forth in Section 121(d)(4)(A) of CERCLA and 40 C.F.R. § 430(f)(1)(ii)(C)(1).

ARARs for this action that are not waived include, among others, Federal and State regulations covering dust suppression, erosion control, disposal requirements and other construction-related activities. Other ARARs for this action that are not waived include Federal and State regulations covering discharge of contaminants to surface water from groundwater extraction and treatment.

II. DECISION SUMMARY

***CHEM-FAB SUPERFUND SITE
OPERABLE UNIT 2
EARLY INTERIM REMEDIAL ACTION***

DOYLESTOWN BOROUGH, BUCKS COUNTY, PENNSYLVANIA

1.0 SITE NAME, LOCATION AND DESCRIPTION

The Chem-Fab Superfund Site (“Chem-Fab Site” or “Site”) is located at and around 300-360 N. Broad Street in Doylestown Borough, Bucks County, Pennsylvania (Figure 1). The Site is located approximately 0.6 miles from the center of Doylestown and is surrounded by a mixture of commercial, industrial and residential areas. The closest school is approximately 0.5 miles to the southwest.

The Site includes 300-360 N. Broad Street (the “Property”) upon which industrial and disposal operations occurred in the past as well as other properties where contamination from such operations has migrated or otherwise come to be located. The Property currently contains an office park located in three buildings which host several commercial tenants. From the mid-1960s to the early 1990s, Chem-Fab, Inc. (“Chem-Fab”) operated an electroplating and metal etching facility on the Property. Chem-Fab’s operations generated wastes that included metals, volatile organic compounds (“VOCs”) and other industrial wastes. The Comprehensive Environmental Response, Compensation, and Liability Information System (“CERCLIS”) identification number for the Site is PAD002323848.

The U.S. Environmental Protection Agency (“EPA”) is the lead agency for Site activities and the Pennsylvania Department of Environmental Protection (“PADEP”) is the support agency. The first operable unit (“OU1”) consists of certain contaminated soils at the Property. In December 2012, an interim record of decision (“ROD”) for OU1 was signed. The selected remedy in the OU1 interim ROD consisted of excavation and off-Site disposal of contaminated soils outside the footprint of the buildings on the Property and backfilling the excavation areas with clean fill. The action in this ROD addresses the area of highest groundwater contamination (“AOHC”) within Operable Unit 2 (“OU2”). OU2 consists of contaminated groundwater at the Site. This action comprises the first remedial action for OU2 and is considered an early interim action.

An “interim action” is limited in scope and solely addresses areas/media that will also be addressed by a final ROD. Interim actions are implemented to:

- Take quick action to protect human health and the environment from an imminent threat in the short term while a final remedial action is being developed, or
- Institute temporary measures to stabilize the Site or OU and/or prevent further migration of contaminants or further environmental degradation.

In this instance, it is appropriate to take an interim action in order to prevent further migration of groundwater contamination and to ensure that contamination does not reach areas where it could expose the public and the environment to unacceptable levels of contamination. The scope and media to be addressed by this interim action are limited to groundwater within the AOHC.

The term “early” is used to describe when an action is taken in the Superfund process. In this instance, the action is “early” because it is being implemented before completion of the remedial investigation and feasibility study (“RI/FS”) for the Site¹.

In August 2015, EPA began work on a focused feasibility study (“FFS”) to identify alternatives for an early interim remedial action to address the AOHC at the Site based on data collected by EPA during the current RI and by PADEP in its previous investigations. The FFS, dated September 2016, summarizes these investigations and identifies alternatives for addressing contaminated groundwater within the AOHC.

2.0 SITE HISTORY AND ENFORCEMENT ACTIVITIES

Prior to construction of the Chem-Fab facility, land use in the vicinity of the Site was mainly agricultural. The Property contained a residential farmhouse and a smaller building. In or around 1965, the Chem-Fab facility was erected and operated as an electroplating and metal etching company through the early 1990s. Electroplating and metal etching operations generated wastes that included ferric chloride, mineral spirits, chromic acid rinse water and sludge, chromic acid, sulfuric acid, sodium bisulfate, sodium hydroxide, and lime. A trichloroethylene (“TCE”) vapor degreasing process was used until 1973. The former Chem-Fab tank farm contained up to six above-ground storage tanks (“ASTs”), including 2,500-, 4,000-, and 8,500-gallon ASTs. The Property additionally contained one 10,000-gallon underground storage tank (“UST”) and a 1,000-gallon underground catch basin.

The Chem-Fab facility was cited several times during the 1960s and 1970s by both the Bucks County Department of Health and the Pennsylvania Department of Environmental Resources (“PADER”) (PADEP’s predecessor agency) for spills and improper discharge of industrial wastes from ASTs, USTs, and the catch basin to Cooks Run, a nearby creek. These releases included chromic acid rinse water spills from broken valves on pretreatment tanks and overflows of the catch basin.

In the late 1970s, Chem-Fab was acquired by Boarhead Corporation, a business established by Manfred DeRewal, Sr (“DeRewal”). DeRewal was also a principal of DeRewal Chemical Company Inc. (“DCC”), which removed, transported, and disposed of chemical waste generated by other companies. Following acquisition by Boarhead Corporation, liquid wastes, including hundreds of thousands of gallons of ammonia, hydrochloric acid, and pickle liquor waste were transported from various industrial entities to the Property for disposal. In addition to Chem-Fab, two other entities associated with DeRewal – a gallium reclamation business and a computer assembly operation – operated at the Property during the 1980s and 1990s, respectively. Chem-Fab owned the property through approximately May 1999.

¹ See “A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents” (Office of Solid Waste and Emergency Response) (July 1999) (“ROD Guidance”), at 8-2

In August 1987, EPA performed a preliminary assessment and site inspection ("PA/SI") at the Site. During the PA/SI, water samples from residential wells and the municipal well located in the vicinity of the Site were found to contain elevated levels of VOCs including TCE and tetrachloroethylene ("PCE"). In October 1987, EPA conducted a removal action which included the delivery of bottled water and carbon filtration units to affected residences and, ultimately, the connection of affected residences to public water supplies.

In September 1994, EPA conducted a removal assessment at the Property. EPA found improperly and incompatibly stored drums of hazardous material, including flammable liquids and acids. Samples from these drums indicated the presence of acids, TCE, and chromium. A drum of radioactive thorium nitrate and containers of ammonia were also discovered. EPA also found a 10,000 gallon UST which contained approximately 6,000 gallons of liquid and sludge and which appeared to be leaking. Samples from the UST were found to contain hexavalent chromium ("Cr[VI]"). Samples taken from a sump located inside the warehouse indicated the presence of TCE.

In 1994-1995, EPA conducted a second removal action at the Site, at which time it found label information on drums and other containers indicating the presence of xylene, toluene, hydrochloric acid, sulfuric acid, nitric acid, caustic soda, methyl isobutyl ketone, polymeric isocyanate, benzenesulfonic acid, nickel rinse waste, methylene chloride, ferric chloride, chromate waste acid, and anhydrous ammonia. During that response, EPA removed 117 drums and 8,400 gallons of liquid wastes, including chromium-contaminated wastes from the UST as well as other solid wastes and fuel oils.

In or around November 1998, PADEP assumed the lead role in further assessing the Site. Beginning in 1999, PADEP began an investigation of the soils and groundwater in the vicinity of the Site. PADEP found Cr[VI] and VOCs in the soils and in the groundwater on the Property and on an adjacent property. Visible chromium contamination was found in the drainage ditch on the adjacent property. In 2004, PADEP issued a Statement of Decision selecting a groundwater remedy for the Site. However, implementation of the remedy was delayed due to technical issues and a lack of funding. PADEP continued its investigation and requested that EPA list the Site on the CERCLA National Priorities List ("NPL"). EPA proposed the Site for the NPL in September 2007. The Site was formally added to the NPL in March 2008.

In September 2009, EPA initiated a Fund-lead RI/FS to comprehensively characterize the nature and extent of contamination at the Site and to evaluate alternatives for addressing threats to human health and the environment presented by such contamination. The remedial investigation ("RI"), which has not yet been completed, has thus far included additional soil, sediment, and groundwater testing to supplement previous investigations conducted by PADEP. EPA has also conducted vapor intrusion sampling in the homes of residents living down-gradient from the Site, and has conducted vapor intrusion sampling in the commercial spaces at the Property.

In November 2012, EPA initiated a third removal action intended to reduce VOCs in suites inside an office building located on the Property. This removal action involved the installation of portable air purifiers into selected suites within the impacted building. Additional indoor air sampling was conducted at the former Chem-Fab facility, and in 2015, a subslab vapor mitigation system was installed to reduce concentrations of VOCs in both the indoor air and subslab. Analysis of samples taken in January 2017 confirm that the vapor mitigation system reduces levels of VOCs in the indoor air and subslab to acceptable levels.

In December 2012, EPA issued an interim ROD for OU1. The selected remedy in the OU1 interim ROD consisted of excavation and disposal of contaminated soils outside the footprint of the buildings on the Property and backfilling the excavation with clean fill.

In September 2013, EPA selected a fourth removal action consisting of excavation and off-Site disposal of certain contaminated soil located at the Property. The removal action was implemented between March and August, 2014. Post-excavation sampling confirmed that soil had been excavated to cleanup levels identified in the OU1 interim ROD.

From August 2015 through September 2016, EPA conducted an FFS to identify alternatives for an interim remedial action to address the AOHC based on data collected by EPA during the ongoing RI and by PADEP in its previous investigations.

3.0 COMMUNITY PARTICIPATION

The FFS, proposed remedial action plan ("PRAP"), and other documents relating to OU2 of the Site are contained in the administrative record supporting selection of this early interim remedial action, which can be viewed at <https://semspub.epa.gov/src/collection/03/AR64588> or at the following locations:

EPA Administrative Records Room, Attention: Administrative Coordinator 1650 Arch Street Philadelphia, PA (215) 814-3157 Hours: Monday through Friday, 8:00am to 4:30pm; by appointment only.	Bucks County Free Library 150 South Pine Street Doylestown, PA 18901 (215) 348-9081
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A notice of availability of these documents was published in the *Intelligencer*, a Bucks County newspaper, on October 6, 2016. In addition, EPA sent a fact sheet summarizing the Agency's preferred remedial alternative for early interim remedial action at OU2 to residences and businesses near the Site in October 2016.

EPA held a 30-day comment period from October 1-October 31, 2016 to accept public comments on the remedial alternatives presented in the PRAP, as well as on the other documents contained within the administrative record file. On October 18, 2016, EPA held a public meeting to discuss the PRAP and accept comments. A transcript of this meeting is

included in the administrative record for this early interim remedial action. The summary of significant comments received during the public comment period and EPA's responses are included in the Responsiveness Summary which is a part of this early interim ROD.

4.0 SCOPE AND ROLE

This early interim remedial action addresses the AOHC within OU2. OU2 consists of contaminated groundwater at the Site. A final action for the Site will be proposed following completion of the RI/FS, which addresses all remaining contaminated media, including groundwater, at the Site.

The AOHC is generally located at the Property where the former Chem-Fab facility was historically located, and the adjacent commercial property to the southwest, as shown on Figure 1. The AOHC is based on groundwater data which indicate that the highest groundwater contamination is generally found in monitoring wells on the Property and adjacent commercial property.

This early interim remedial action for OU2 will specifically address the groundwater within the AOHC located on the Property and the neighboring self-storage facility and will be consistent with subsequent remedial actions which will address all groundwater contamination at the Site.

EPA characterizes waste on-Site as either principal threat waste or low-level threat waste. The concept of principal threat waste and low-level threat waste, as developed by EPA in the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), is applied on a Site-specific basis when characterizing source material. "Source material" is defined as material that includes or contains hazardous substances, pollutants, or contaminants that act as a reservoir for migration of contamination to groundwater, to surface water, to air, or that act as a source for direct exposure². Principal threat wastes are those source materials considered to be highly toxic or highly mobile, which would present a significant risk to human health or the environment should exposure occur. Contaminated groundwater is generally not considered to be source material. However, non-aqueous phase liquids ("NAPLs") in groundwater may be considered source material. The presence of NAPLs has not been determined at the Site. However, TCE and PCE are at concentrations exceeding 1% of their solubility, which is indicative of the presence of NAPLs.

² ROD Guidance, at p. 6-40

5.0 SITE CHARACTERISTICS

5.1 Surface Features, Soil and Geology, Hydrogeology, and Surface Hydrogeology

5.1.1 Surface Features and Resources

The Site includes the Property located at 300-360 N. Broad Street upon which industrial and disposal operations occurred in the past as well as other properties where contamination from such operations has migrated or otherwise come to be located. The Property is currently zoned for commercial use and contains a small office park with three buildings housing several commercial tenants, partially vegetated land, and paved and gravel driveways and parking areas. The Property is bordered to the north by N. Broad Street, to the east by an operating commercial business, and to the south and west by an active self-storage facility. Elevations in the area range from approximately 340 to 360 feet above mean sea level, with the ground sloping gently to the west towards Cooks Run.

5.1.2 Soil and Geology

Soil at the Site is associated with the Doylestown Series and Abbottstown Series and consists of deep, poorly drained, nearly level to gently sloping soil on uplands. The Doylestown soil was formed in silty material overlying a variety of loamy materials generally weathered from shale and sandstone, and the Abbottstown Series consists of deep, somewhat poorly drained, nearly level soil on uplands, formed in loamy material weathered from brown shale and sandstone. Both soil series are considered poorly to moderately permeable and allow for slow to moderate runoff. Across much of the Site, the aforementioned soil series are overlain by fill material. The fill material likely consists of various unconsolidated local soils and gravel compacted and used to level and develop the Site to its current state. Soil boring logs describe soil at the Site as being unsaturated, primarily brown to red silty clay or clayey silt with trace sand.

Overburden material, consisting of soils and saprolite, range in thickness from 4 to 13 feet across the Site. Based on previous investigations, a weathered bedrock zone, consisting of very loose, dry, reddish-brown silt and trace fine to coarse sand, directly overlies the competent bedrock. Depending on the degree of weathering, very stiff reddish-brown clay may also be present.

The Site is located within the Triassic-Lowland physiographic province, which is characterized by an uplifted plane of inclined strata, with the more resistant strata forming residual ridges. Local relief within the region does not exceed 250 feet. The bedrock underlying the Site is Triassic-aged Stockton lithofacies, which consists of interbedded light-colored red to brown coarse-grained sandstones and conglomerates; fine-grained siliceous sandstones; and shales. The sandstones are more prevalent than the shales in this area. The shales and sandstones are interbedded, with individual beds pinching out laterally over short distances.

This geologic unit has a calculated thickness of approximately 3,000 feet, strikes from northeast to southwest (approximately N30°E), with a dip of approximately 10 degrees to the northwest. The formation contains a system of extensive fractures, generally oriented parallel and perpendicular to the strike of the bedrock units. The formation is cut by a well-developed system of joints and fractures.

5.1.3 Hydrogeology

Groundwater was encountered in the overburden soils and within the bedrock underlying the Site. The bedrock unit underlying the Site is the Triassic Stockton formation and was encountered at depths ranging from 8 to 18 feet below ground surface. Data collected to date indicate components of groundwater flow to the west and to the southwest. The formation has a wide range of well yields, ranging from 2 to 440 gallons per minute. A network of ninety-two (92) monitoring wells has been installed to characterize the contamination and hydrogeologic conditions at the Site. In order to help interpret and describe the geology at the Site, the rock stratigraphy in the monitoring wells has been divided into shallow, intermediate and deep zones. Monitoring wells have also been installed in the overburden layer to assess the groundwater flowing above the bedrock. The general groundwater flow direction at the Site is along the strike direction towards the southwest.

5.1.4 Surface Hydrogeology

Cooks Run is the sole named water body located within a one-mile radius of the Site. Surface drainage from the Property generally flows to the west and southwest toward Cooks Run via overland flow. A surface swale is also present on the self-storage facility, which directs surface run-off south and then west to Cooks Run. Cooks Run also receives groundwater from areas where the stream directly intersects the local groundwater table, as well as from nearby groundwater upwelling, which flows into Cooks Run in the form of overland flow. Cooks Run is a tributary of Neshaminy Creek, which eventually flows into the Delaware River.

The forested area to the west of Cooks Run includes scattered forested wetlands. These include isolated pools as well as areas associated with periodic inundation from Cooks Run. Many of the wetlands extend a significant distance from Cooks Run and appear to drain nearby forest corridors and developments. These wetlands are expected to receive inputs from a variety of sources, including overbank flooding, overland flow, ponding over fine grained deposits of clay or silt, and groundwater seeps. Temperature and conductivity surveys of these wetlands did not identify gradients that would clearly indicate the presence of seeps. Sediment in these wetlands was observed to be dense clay mixed with sand and gravel, which, along with the shallow physiographic setting of the wetlands, indicate that they are likely to be dominated by overland water sources rather than seeps.

Wetlands are also located east of Cooks Run in the forest and open field area. Temperature and conductivity surveys of these wetlands also did not identify gradients that would clearly indicate the presence of groundwater seeps. However, groundwater seeps have

been observed on previous Site visits along the drainage swale leading from the area south of the self-storage facility. Also, several areas of the open field along Cooks Run have been observed to hold water for long periods after precipitation and exhibit drainage patterns that do not originate from an obvious overland source. Therefore, it is suspected that these low lying areas may function as groundwater seeps after periods of precipitation.

Surface water is also present in the form of two ponds south of the self-storage facility. One of the ponds is associated with a wastewater treatment facility, and the second appears to be a stormwater management pond associated with a housing development. It is unknown if these ponds are lined or if they may have a hydrologic connection with underlying groundwater. Observations during Site visits indicate that the pond associated with the housing development appears to have a clay bottom.

5.2 Nature and Extent of Contamination

Between 1998 and 2007, PADEP conducted extensive testing to assess the soils, groundwater and surface water at and in the vicinity of the Site. PADEP's efforts revealed high levels of soil contamination on the Property and the presence of Site-related contamination in the groundwater underneath, and migrating from, the Property. After listing the Site on the NPL, EPA initiated an RI to further characterize contamination at the Site, which has included additional soil, sediment, surface water and groundwater sampling, as well as installation of additional groundwater monitoring wells to delineate the groundwater plume. EPA has also conducted vapor intrusion sampling in the homes of residents living down-gradient from the Site, and in the commercial spaces at the Property.

5.2.1 Surface Soil

During the course of its investigation, PADEP collected 261 soil samples from 168 locations at and around the Property between 1999 and 2007. Soil at the Property was found to be contaminated with 47 chemicals above EPA Regional Screening Levels ("RSLs") including a number of inorganics, VOCs, and semi-volatile organic compounds ("SVOCs"). The most significant exceedances included Cr[VI], PCE, and TCE. Cr[VI], PCE, and TCE were found at concentrations up to 781 mg/kg, 190 mg/kg, and 4,000 mg/kg, respectively. The area of highest soil contamination roughly corresponds to the area where the above-ground tank farm was previously located. The former Chem-Fab facility had up to six above-ground storage tanks as well as a 10,000 gallon underground storage tank. Drums of hazardous waste were also found in this area during the 1994 EPA removal action.

As stated in Section 2.0, in December 2012, an interim ROD was issued selecting a remedy for OUI to address the soil contamination outside the footprint of the existing buildings on the Property. The selected remedy consisted of excavation and disposal of contaminated soils and backfilling the excavation with clean fill. In September 2013, EPA selected a removal action to excavate and dispose these soils off-Site. The removal action was conducted between March and August of 2014, and met the performance standards of the OUI interim ROD.

5.2.2 Groundwater

Groundwater at the Site contains many of the constituents found in soil at the Property including, among other contaminants, Cr[VI], PCE, TCE, and chemicals associated with the degradation of PCE and TCE. The presence of the same contamination in groundwater and soil suggests that the two are linked and that the groundwater contamination is likely a result of infiltration of contamination from the soil into the water table below. Figure 3 shows the current network of groundwater monitoring wells. Groundwater at the Property was found to be contaminated with 47 chemicals above EPA screening levels including a number of inorganics, VOCs, and semi-volatile organic compounds (“SVOCs”). Table 1 provides a list of chemicals exceeding EPA screening levels in the groundwater. The most significant exceedances include Cr[VI], PCE, and TCE. Cr[VI] has been detected at concentrations up to 233,000 µg/L in the groundwater. PCE and TCE have been detected in the groundwater at concentrations up to 4,330 µg/L and 35,000 µg/L, respectively. 1,4-dioxane was detected at a maximum concentration of 40 µg/L. Perfluoroalkyl substances (“PFASs”) were also detected in the groundwater. Perfluorooctanoic acid (“PFOA”) has been detected at concentrations up to 0.211 µg/L and perfluorooctane sulfonic acid (“PFOS”) has been detected at concentrations up to 1.9 µg/L. Figures 2 to 10 are the most current plume maps for Cr [VI], PCE, and TCE. The AOHC is located primarily below the former Chem-Fab property and the adjacent self-storage facility.

Groundwater contamination extends from the Property in a southwest direction beneath the adjacent self-storage facility and beneath neighboring properties in Doylestown Township. The groundwater contamination also flows slightly westward in the dip direction towards Cooks Run, which is a tributary of the Neshaminy Creek. The highest levels of contamination reside in the overburden, shallow, and intermediate zones. However, groundwater contamination is also present in the deeper bedrock zone. Groundwater contamination continues to be investigated as part of the RI.

5.2.3 Residential Wells

Tenants at the Property rely on the local public water supply for potable water. However, residential and commercial wells exist in areas considered downgradient from the groundwater contamination. In 1987, residential wells in the vicinity of the Property were sampled as part of the PA/SI. Water samples from some of these wells were found to contain elevated levels of TCE and PCE. As a result, EPA conducted a removal action consisting of the delivery of bottled water and carbon filtration units to affected residences and connection of affected residences to public water supplies in 1987.

In November 2013 and January 2014, EPA collected samples from five residential wells and one commercial well located to the west and southwest of the Site, primarily along West Street and Shady Retreat Road. One of the residential wells was found to be contaminated with TCE above the applicable Maximum Contaminant Level (“MCL”) established under the Safe Drinking Water Act. No other Site-related contamination was

found in this well at levels of concern. In May 2014, EPA began providing bottled water to the impacted resident. The resident was subsequently connected to public water in 2015.

EPA collected samples from these residential and commercial wells again in July 2014 and from two additional private wells in September 2014. These samples were analyzed for PFASs. No PFASs were found in these wells above the EPA Lifetime Health Advisory for PFOS/PFOA of 0.07 ug/L.

5.2.4 Municipal Supply Wells

In Doylestown Borough, potable water is obtained by drilling into the bedrock and extracting the groundwater. Doylestown Municipal Water Authority Well #13 ("MSW-13") is located approximately one-quarter mile southwest of the Property and was shut down in 2001 to prevent further spread of the contamination. Doylestown Municipal Water Authority Well #13 was historically pumped in the deeper portion of the aquifer. Doylestown Municipal Water Authority Well #8 ("MSW-08") is located approximately a half mile downgradient of the Property and continues to be monitored regularly for contamination. Samples in MSW-08 thus far have not shown levels of contamination which would warrant further response actions.

5.2.5 Surface Water

Contamination in the overburden layer appears to be discharging in the drainage swale surrounding the adjacent self-storage facility. Additionally, contamination in the surface water and on-Site swale may also be attributable to overland flow of surface run-off through areas where contaminated groundwater seeps have collected. PADEP enclosed the swale to prevent the potential for contact with the contamination.

5.2.6 Vapor Intrusion

VOCs that are released into the subsurface may form hazardous vapors. Those vapors can be transported through unsaturated soils and eventually enter buildings through cracks or other conduits in basement floors, walls or foundations. This phenomenon is known as vapor intrusion. VOC contamination in soils and groundwater at the Site has raised concerns for vapor intrusion as an exposure pathway. In April 2010, a vapor intrusion sampling assessment was conducted by EPA at nine residential properties and one elementary school near the Property. VOCs were not detected in the indoor air samples collected from the elementary school. Five residential properties had detections of VOCs in sub-slab samples. However, no residential properties had detection of VOCs above screening criteria in indoor air samples.

In October 2011 and January 2012, sub-slab and indoor air sampling was conducted in the three buildings located at the Property. VOCs were detected in the indoor air of one of the buildings and below the sub-slab of two of the buildings. In August 2012, the indoor air of the largest of the three buildings was reassessed. VOCs were again identified in portions of the building. As a result, EPA initiated a removal action intended to reduce VOCs in the

building. To accomplish this, EPA installed portable air purifiers into selected suites within the impacted building. EPA then collected additional data to evaluate the efficacy of such units with the existing building vapor mitigation system in reducing VOCs levels within the building.

In July 2015, EPA conducted tests to support the design and construction of a vapor mitigation system to address vapor intrusion in the main building on the Property. The vapor mitigation system was constructed in late 2015. In January 2017, sampling was performed to confirm that the vapor mitigation system is reducing VOC concentrations in the indoor air to acceptable levels.

5.3 Conceptual Site Model

A conceptual site model ("CSM") describes contaminant sources, contaminant release mechanisms and migration routes, exposure pathways, and potential receptors. It documents what is known about human exposure under current and potential future Site conditions. Since this early interim remedial action for OU2 addresses contaminated groundwater, this portion of the CSM is considered in this early interim ROD.

The primary source of contamination to the AOHC is the soils on the Property which were impacted during the operation of the former electroplating facility and disposal operations at the Property. Contamination in soils migrates into groundwater via leaching. Exposure to contaminated groundwater occurs via ingestion or dermal contact with contaminated groundwater. Groundwater can be ingested or contacted when the contamination reaches drinking water supply wells or private drinking water wells. Groundwater may also contaminate surface water or sediment if it daylight through seeps. Surface water and sediment contamination may then impact either human or ecological receptors. Groundwater contamination may also contribute to vapor intrusion and affect the indoor air in buildings. For these exposure scenarios, potential human receptors include residents (adult and child), commercial workers, trespassers, recreational users, and construction workers.

6.0 CURRENT AND POTENTIAL FUTURE LAND AND RESOURCE USES

The Site includes the Property (land upon which industrial and disposal operations occurred in the past) as well as other properties where contamination from such operations has migrated or otherwise come to be located. The Property is a one-acre parcel that currently contains three buildings renovated into commercial office spaces: a large building formerly used for warehousing/manufacturing, a smaller building formerly used for storage, and an older farmhouse. The warehouse/manufacturing building was constructed of a steel frame with block walls on an on-grade slab over a small crawl space. The storage building is a two-story structure with a crawl space. The farmhouse is a 2.5-story structure with a partial crawl space. Space between the buildings is used as parking areas. Surrounding land use is primarily commercial/industrial, although residential areas are located just west and northwest of Cooks Run and southwest of the wastewater treatment

system. Cooks Run is surrounded by wetlands and/or wooded areas. Future land use is anticipated to be consistent with the current land use.

The aquifer at the Site is designated by Pennsylvania as a Class IIA aquifer, a drinking water aquifer. Residents in the vicinity of the Site area served by the Borough of Doylestown public water supply. Two Doylestown Municipal Authority supply wells have been affected by contamination from the Site. MSW-13 was shut down due to concerns over the effect of pumping on plume migration. MSW-08 has shown low levels of Site-related contamination and continues to be monitored. Continued use of groundwater as a water supply is anticipated in the future.

7.0 SUMMARY OF SITE RISKS

Information from PADEP and EPA investigations was used to evaluate potential risks to human health and the environment from exposure to contaminants from the Site. Because the scope of this early interim remedial action is limited to addressing groundwater within the AOHC, only contamination in groundwater was considered in evaluation of these risks for this early interim ROD. Since the RI has not been completed for the Site, a baseline human health risk assessment (“HHRA”) was not prepared for this operable unit. Instead, a risk evaluation was performed, which is described in the following sections. A full HHRA will be performed prior to selecting a final remedial action at the Site.

7.1 Summary of Risk Evaluation

The risk evaluation involved comparison of contaminant levels in groundwater within the AOHC to their respective risk-based standards. These standards include EPA’s drinking water standards known as MCLs, established under the Safe Drinking Water Act, 42 U.S.C. § 300f et seq., and 40 C.F.R. Part 141, Subpart G, and Regional Screening Levels (“RSLs”). For contaminants which have both an MCL as well as an RSL, the lower of the two values was used to provide a more conservative screening. The May 2016 EPA Office of Drinking Water Lifetime Health Advisories for PFOA and PFOS were used to calculate a screening value for PFOS and PFOA. A screening level of 0.04 ug/L combined concentration of PFOS and PFOA was calculated based on the reference dose in the Health Advisories and a hazard quotient of 0.1. Table 1 summarizes this risk evaluation.

7.1.1 Contaminants of Concern

The primary contaminants of concern (“COCs”) within the AOHC consist of Cr [VI], PCE, TCE, and chemicals associated with the degradation of PCE and TCE. The designation of these COCs is based on their exceedances of their respective standards for human ingestion which provide the basis for this interim remedial action. Cr[VI] was detected at concentrations of up to 233,000 µg/L. The tap water RSL for Cr[VI] is 0.035 µg/L. TCE was detected at concentrations of up to 35,000 µg/L. The tap water RSL for TCE is 0.28 µg/L and the MCL is 5 µg/L. PCE was detected at concentrations of up to 4,330 µg/L. The RSL for PCE is 4.1 µg/L and the MCL is 5 µg/L. Direct contact with these concentrations of Cr[VI], TCE and PCE would result in cancer risk levels that exceed

EPA's acceptable risk range of 10^{-4} to 10^{-6} or non-cancer risk levels that exceed a hazard index ("HI") of 1.0.

7.1.2 Principal Threat Waste

EPA characterizes waste as either principal threat waste or low-level threat waste. The concept of principal threat waste and low-level threat waste, as developed by EPA in the NCP, is applied on a site-specific basis when characterizing source material. "Source material" is defined as material that includes or contains hazardous substances, pollutants, or contaminants that act as a reservoir for migration of contamination to groundwater, to surface water, to air, or that act as a source for direct exposure. Principal threat wastes are those source materials considered to be highly toxic or highly mobile, which would present a significant risk to human health or the environment should exposure occur.

Contaminated groundwater is generally not considered to be source material. However, non-aqueous phase liquids ("NAPLs") in groundwater may be considered source material. The presence of NAPLs has not been determined at the Site. However, TCE and PCE are at concentrations exceeding 1% of their solubility, which is indicative of the presence of NAPLs.

7.2 Conclusion of Risk Assessments

While risk calculations were not performed as part of a HHRA to establish baseline risk levels, groundwater contaminant concentrations exceeded EPA MCLs and RSLs by several orders of magnitude. EPA concludes, based on the data, that the concentrations of COCs in groundwater in the AOHC at OU2 of the Site present unacceptable risks based on the direct contact exposure pathway, namely, that direct contact via ingestion and dermal contact to the groundwater within the AOHC presents risks that exceed the cancer risk range of 10^{-4} to 10^{-6} or the non-cancer risk hazard index of 1.0 as described at 40 C.F.R. 300.430(e)(2)(i)(A)(2).

EPA has conducted sampling of both private drinking water wells and MSW-08. Based on the results, EPA has determined that the public is not currently being exposed to contamination exceeding EPA's acceptable risk range. However, the continued use of MSW-08 has the potential to introduce contamination into the drinking water supply and expose the public to unacceptable levels of contamination in the future.

As indicated in Section 5.2.6, groundwater contamination has the potential to expose the public through the vapor intrusion pathway. Residential areas exist to the southwest and west of the Site in the direction of groundwater flow. Continued migration of contamination towards these areas has the potential to increase the risk of vapor intrusion into these homes.

Movement of contaminants from the groundwater to surface water via seeps has the potential to expose human and ecological receptors to contaminants. A forested wetlands area and creek are situated to the west of the Property, in the direction of groundwater flow. It is unknown to what extent groundwater from the Property discharges to these areas.

However, continued uncontrolled migration of contamination has the potential to impact these sensitive ecosystems and receptors located there.

In addition, sampling results indicate the presence of 1,4-dioxane and PFAS in the groundwater within the AOHC. EPA will continue to monitor for these contaminants as part of the ongoing RI/FS to determine if these particular contaminants present an unacceptable risk to human health or the environment at the Site.

EPA has determined that the early interim remedial action selected in this early interim ROD is necessary to protect public health or welfare or the environment from actual or threatened releases of hazardous substances, pollutants, or contaminants into the environment.

8.0 REMEDIAL ACTION OBJECTIVES

EPA guidance states that “[a]n interim action is limited in scope and only addresses areas/media that also will be addressed by a final Site/operable unit ROD.”³ This early interim remedial action is not intended reduce all contamination in all media types at this Site. However, the Remedial Action Objectives (“RAOs”) are designed to support a final remedial action which will comply with CERCLA requirements for cleanup of contaminated groundwater and restore the groundwater to beneficial use as required by the NCP. This early interim remedial action is intended solely to address contaminated groundwater within the geographic boundaries of the AOHC. Therefore, the RAOs reflect this limited scope. By addressing contaminated groundwater within the AOHC, the early interim remedial action will reduce Site risks by ensuring contamination within the AOHC does not continue to migrate toward locations including MSW-08, residential areas, and wetlands where it could impact human and ecological receptors via direct contact or vapor intrusion. The early interim remedial action will also begin restoration of the Site groundwater by treating contaminated groundwater from the AOHC, thereby reducing the volume of contaminated groundwater present in the aquifer. These RAOs are designed to support a final remedial action which will entail complete restoration of the aquifer. The RAOs are as follows:

- Prevent further migration of contaminated groundwater from the AOHC, and
- Begin restoration of the groundwater to beneficial use by reducing volume of contaminated groundwater within the AOHC.

The remedial alternatives listed below are limited in scope to solely address these RAOs. Contamination in other media and other Site locations will be addressed separately.

9.0 SUMMARY OF REMEDIAL ALTERNATIVES

An RI/FS is currently being conducted to comprehensively characterize Site contamination and risks and to facilitate selection of additional remedial actions for the Site. With the

³ ROD Guidance at p. 8-2.

exception of the No Action alternative, the remedial alternatives for early interim remedial action evaluated during the FFS and presented below will meet the RAOs as well as contribute to subsequent remedial actions. Detailed information on these alternatives may be found in the administrative record supporting selection of this early interim remedial action.

The remedial alternatives for early interim remedial action that were considered in the FFS are as follows:

- Alternative 1: No Action
- Alternative 2: Groundwater Extraction and Treatment with Air Stripping, Ultra-Violet (“UV”) Oxidation, Ion Exchange, and Carbon Adsorption
- Alternative 3: Groundwater Extraction and Treatment with Air Stripping, Photo-Cat, and Carbon Adsorption

9.1 Remedial Alternatives

This section describes the remedial alternatives that EPA considered. The total present worth cost for each alternative was calculated using a 7% discount rate and an operation and maintenance (“O&M”) period of 30 years (unless otherwise noted).

Common Elements

Both Alternatives 2 and 3 require extraction of groundwater, treatment, and discharge to Cooks Run. To prevent further migration of contaminated groundwater from the AOHC, these alternatives include installation of approximately ten extraction wells with a total anticipated pumping rate of 100 gallons per minute (“gpm”). The exact number, location, depth and pump rate of extraction wells would be determined during the remedial design phase. For cost estimating purposes, it is assumed that seven extraction wells would be installed down to 75 feet below ground surface (“bgs”) and three extraction wells would be installed to a depth of 50 feet bgs. These depths are based on current knowledge of bedrock geology; however geophysical testing would be needed to determine the final construction depths. Figure 11 provides potential locations of extraction wells. Actual locations would be determined during the remedial design. The extracted water from the unconfined overburden, shallow bedrock, and semiconfined bedrock aquifer would be treated by a groundwater extraction and treatment system (“GETS”).

For both Alternatives 2 and 3, a treatment building would be constructed to house the necessary equipment to treat the extracted groundwater. Assuming all treatment components are required, the building would need to be approximately 40-feet by 40-feet in plan view and approximately 20 feet tall. The actual components that would be included in the treatment train would be determined during remedial design. Potential locations for the treatment building under current consideration are:

- A. The Property (300-360 N. Broad Street, location “A” on Figure 11): An access road from the adjacent self-storage facility would likely need to be constructed in

order to access the treatment system. Approximately ten parking spaces would be covered once the treatment building is constructed.

- B. The southern portion of the adjacent self-storage facility (390 N. Broad Street, location "B" on Figure 11): This area has soft soil, and the land is characterized as forested wetland. Due to these conditions, helical anchor/piles would be installed to bedrock to support the foundation of the building if this location or similar location were selected.
- C. The field to the west of the self-storage facility (400 N. Broad Street, location "C" on Figure 11): An access road would need to be constructed from North Broad Street to access this location.

Treatment building locations A and C as depicted in Figure 11 would minimize impact to surface water hydrology and forested wetlands as compared to location B. Construction in location B would need to comply with Executive Order 11990 (42 Fed. Reg. 26961 (May 24, 1977)) Sections 1 and 2 pertaining to the protection of wetlands as well as any substantive requirements determined to be applicable and/or relevant and appropriate under Section 121(d) of CERCLA, 42 U.S.C. § 9621(d).

Common elements of the treatment technologies for Alternatives 2 and 3 include bag filters to remove suspended solids, granular activated carbon ("GAC") to remove VOCs and PFASs, and air stripping to remove VOCs, if it is determined that GAC would not cost-effectively remove both VOCs and PFASs.

For both Alternatives 2 and 3, the treated water would be discharged to Cooks Run. Influent and effluent sampling would be conducted according to National Pollution Discharge Elimination System ("NPDES") substantive requirements. Depending on the number of technologies included in the treatment train, additional sampling would be conducted to monitor effectiveness and estimate breakthrough curves. For cost estimating purposes, the frequency of this performance monitoring is assumed to be monthly during the first year of operation and could change to quarterly for the remaining years of operation. A long-term monitoring program would be implemented, which includes an estimated 35 monitoring locations, including the extraction wells that would be sampled semiannually for the first five years of operation and annually thereafter. These monitoring locations would be divided equally between the unconfined overburden, unconfined shallow bedrock, and semiconfined bedrock aquifer.

ALTERNATIVE 1: NO ACTION

<i>Estimated Capital Cost:</i>	<i>\$0</i>
<i>Estimated Present Worth O&M Cost:</i>	<i>\$0</i>
<i>Estimated Total Present Worth Cost:</i>	<i>\$0</i>
<i>Estimated Construction Timeframe:</i>	<i>None</i>

Consideration of this alternative is required by the NCP and CERCLA. Alternative 1 requires no additional remedial action to be taken at the Site. The No Action alternative serves as a basis against which the effectiveness of all the other proposed alternatives can be compared. Under this alternative, the Site would remain in its present condition, and groundwater contamination would be subject to natural processes only.

ALTERNATIVE 2: GROUNDWATER EXTRACTION AND TREATMENT WITH AIR STRIPPING, UV OXIDATION, ION EXCHANGE, AND CARBON ADSORPTION

<i>Estimated Capital Cost:</i>	<i>\$1,619,000</i>
<i>Estimated Present Worth O&M Cost:</i>	<i>\$6,492,000</i>
<i>Estimated Total Present Worth Cost:</i>	<i>\$8,111,000</i>
<i>Estimated Construction Timeframe:</i>	<i>1 year</i>
<i>Estimated Time to Achieve RAOs:</i>	<i>30 years</i>

Under Alternative 2, groundwater within the AOHC would be extracted to prevent further migration of such contamination outside the AOHC; treated using ion exchange, carbon adsorption, and (depending on treatment needs to be determined during the remedial design) UV oxidation or air stripping; and discharged to Cooks Run. Information about the influent concentrations of PFASs and 1,4-dioxane would be used to develop site-specific discharge criteria in accordance with the Pennsylvania Clean Streams Law and Section 402 of the Clean Water Act ("CWA") during the remedial design. Once discharge limits are set, the need to treat PFASs and 1,4-dioxane to meet those limits would be determined. Figure 12 illustrates three different scenarios depending on which constituents need treatment. These differences in the treatment train would have a significant impact on the capital and operation and maintenance ("O&M") cost of the GETS. To ensure an accurate comparison with Alternative 3, the cost estimate for this alternative assumes that all Site COCs would require treatment, which corresponds to Scenario 1, described below. Testing during design and initial system operation would determine if treatment components targeting specific COCs could be eliminated or bypassed. The following sections describe the different scenarios depending on the contaminants that would need to be treated.

Scenario 1: UV Oxidation, Ion Exchange, GAC

This scenario assumes treatment for VOCs, 1,4-dioxane, Cr[VI] and PFASs (Figure 12). Within the treatment system, the extracted water would initially go through bag filters to remove suspended solids. A UV oxidation system would then be used to treat 1,4-dioxane. The UV oxidation system would also reduce the VOC concentrations and potentially reduce PFAS concentrations without reducing 1,4-dioxane treatment efficiency. However, the reductions of these constituents would likely not be sufficient to meet the VOC and PFAS discharge criteria. Although a more robust UV oxidation system could be designed to completely treat the VOCs and improve PFAS removal, the remaining VOCs and PFASs would likely be more efficiently treated by carbon adsorption. The concentrations of VOCs and PFASs, however, would be significantly reduced, decreasing the chemical loading on the treatment components for VOCs and PFASs.

After passing through the UV oxidation system, the water would run through an ion exchange system to treat Cr[VI].

To treat the remaining VOCs and PFASs, liquid-phase GAC vessels would be installed to treat the water effluent from the ion exchange units. The rationale for installing the GAC vessels after the removal of Cr[VI] would be to eliminate the potential contamination of GAC with chromium because chromium-contaminated GAC could not be reactivated and would have to be sent to a Resource Conservation and Recovery Act ("RCRA")-permitted facility for disposal. Based on design of systems at Sites with similar contamination, treatment of PFASs by GAC requires a longer contact time than other contaminants typically treated with GAC. As such, the size of the GAC vessels may be comparatively larger than a typical system. During the remedial design, an accelerated column test ("ACT") can be conducted with Site groundwater to determine the effect of Site-specific water quality on PFAS removal, the effect of TCE treatment on PFAS removal, and appropriate GAC vessel dimensions.

Scenario 2: Air Stripper, Ion Exchange, GAC

If additional study during the remedial design concludes that 1,4-dioxane is not present at levels that would require treatment prior to discharge to surface water, the UV oxidation system could be removed from the treatment train. Therefore, this scenario assumes only VOCs, Cr[VI], and PFASs would require treatment (Figure 12). However, without the presence of the UV oxidation system, the GAC would likely receive higher VOC concentrations. This scenario assumes that the GAC would not be able to simultaneously treat PFASs and VOCs to attain the potential discharge criteria. As a result, this scenario includes a low-profile air stripper or tray aerator to treat VOCs at the head of the treatment plant after the bag filters. The blower and transfer pump would be designed to handle the anticipated influent rate and VOC mass loading. If it is determined that the off-gas from the air stripper presents an unacceptable risk to human health, it would be treated using vapor-phase GAC vessels.

Scenario 3: Ion Exchange, GAC

This scenario assumes, like Scenario 2, that the UV oxidation system would not be required for treatment of 1,4-dioxane. Therefore, this scenario assumes only VOCs, Cr[VI], and PFASs would require treatment (Figure 12). The difference between this scenario and Scenario 2 is that this scenario assumes that the GAC would be able to simultaneously treat VOCs and PFASs. Additionally, if PFASs do not require treatment, it is likely that only GAC would be needed to treat the VOCs. As a result, the air stripper would not be needed, and the treatment system would consist of ion exchange and GAC.

ALTERNATIVE 3: GROUNDWATER EXTRACTION AND TREATMENT WITH AIR STRIPPING, PHOTO-CAT, AND CARBON ADSORPTION

<i>Estimated Capital Cost:</i>	<i>\$2,190,000</i>
<i>Estimated Present Worth O&M Cost:</i>	<i>\$6,782,000</i>
<i>Estimated Total Present Worth Cost:</i>	<i>\$8,972,000</i>
<i>Estimated Construction Timeframe:</i>	<i>1 year</i>
<i>Estimated Time to Achieve RAOs:</i>	<i>30 years</i>

Under Alternative 3, groundwater within the AOHC would be extracted to prevent further migration of such contamination outside the AOHC; treated using air stripping, photo-catalyzation, and carbon adsorption; and discharged to Cooks Run. To provide an accurate comparison between Alternative 3 and Alternative 2, Alternative 3 assumes that 1,4-dioxane and PFASs would not meet the discharge criteria and would require treatment. This is the same assumption as in Alternative 2, Scenario 1. Testing during design and initial system operation would determine if treatment components specific to these parameters could be eliminated or bypassed based on discharge criteria and influent concentrations.

Alternative 3 would utilize Photo-Cat technology to treat 1,4-dioxane and Cr[VI]. A Photo-Cat system is designed to reduce Cr[VI] to lower levels than typical ion exchange systems. This system would require a comprehensive pilot test to evaluate Cr[VI] treatment efficiency for Site-specific groundwater. Water from the air stripper would run through the Photo-Cat platform. On the Photo-Cat platform, citric acid would be injected into the water to facilitate the reaction. The water would then be mixed with titanium dioxide (TiO₂) and passed through tubes that would expose the water to UV light. The UV light would activate the TiO₂ which would oxidize the citric acid and 1,4-dioxane and use the removed electrons to reduce the Cr[VI] to trivalent chromium. The trivalent chromium would then adsorb onto the TiO₂.

The water would then pass through two cross-flow filters that would separate the flow stream from the TiO₂. The treated water would exit the Photo-Cat system and be discharged to Cooks Run. The separated TiO₂ slurry would return to the TiO₂ accumulation tank and be reused to treat incoming water. A slipstream of the TiO₂ would continuously be removed. This material would enter the vessels where the TiO₂ would be dewatered and concentrated. Once the level of TiO₂ in these vessels reaches preset levels, the TiO₂ cleaning process would begin. Heated sulfuric acid would then be added and agitated to remove the adsorbed chromium. Water would be added to the vessels, agitated, and pushed out to remove any residual chromium and acid. The cleaned TiO₂ would be returned to TiO₂ storage tank for reuse. The residual acid and water would enter the chrome recovery tank. Sodium hydroxide would be added to this tank to neutralize the pH. This would cause the trivalent chromium to precipitate out as chromium hydroxide, which would be removed from the system as a slurry into a drum for off-Site disposal.

Although the treatment of VOCs could be addressed by the selected treatment technology for Cr[VI] (Photo-Cat), the presence of VOCs would decrease the efficiency of the Photo-

Cat system in treating Cr[VI]. Therefore, a low profile stripper to treat the VOCs would be included in this alternative as the first step of the treatment train after the bag filters. If it is determined that emission of VOCs present an unacceptable risk to human health or the environment, the off-gas from the air stripper would be treated using vapor-phase GAC vessels.

10.0 EVALUATION OF ALTERNATIVES

In this section, the remedial alternatives summarized above are compared to each other using the criteria set forth in 40 C.F.R. § 300.430(e)(9)(iii). In the remedial decision-making process, EPA profiles the relative performance of each alternative against the evaluation criteria, noting how each compares to the other options under consideration. A detailed analysis of alternatives can be found in the FFS which is in the administrative record supporting selection of this early interim remedial action.

These evaluation criteria relate directly to requirements of Section 121 of CERCLA, 42 U.S.C. § 9621, for determining the overall feasibility and acceptability of a remedy. The nine criteria fall into three groups described as follows:

Threshold criteria must be satisfied in order for a remedy to be eligible for selection. The first two criteria are threshold criteria: (1) overall protection of human health and the environment, and (2) compliance with applicable or relevant and appropriate requirements ("ARARs"). The selected remedy must meet the first criteria as well as the second criteria unless an ARARs waiver is invoked.

Primary balancing criteria are used to weigh major tradeoffs between remedies. The next five criteria are the primary balancing criteria: (3) long-term effectiveness and permanence; (4) reduction of toxicity, mobility or volume through treatment; (5) short-term effectiveness; (6) implementability; and (7) cost.

Modifying criteria are formally taken into account after public comment is received on the Proposed Plan. The modifying criteria include the remaining two criteria: (8) State acceptance and (9) community acceptance.

The following discussion summarizes the evaluation of the remedial alternatives developed for the early interim remedial action at OU2 of the Site against the nine evaluation criteria.

Overall Protectiveness of Human Health and the Environment

A primary requirement of CERCLA is that the selected remedial action be protective of human health and the environment. A remedial action is protective if it reduces, to acceptable levels, current and potential risks associated with each exposure pathway at a Site. Because this is an early interim remedial action, the intent is not to address all exposure pathways. Only exposure pathways associated with contaminated groundwater within the AOHC are considered in this criterion.

Alternative 1 (No Action) does not include measures to prevent current and future receptors from contact with contaminated groundwater. While a human health and ecological risk assessment has not been completed, comparison of contaminants detected in the groundwater with risk-based standards suggests that several contaminants would present unacceptable risk if human receptors were exposed to the contaminated groundwater. If action is not taken, contaminated groundwater could potentially be drawn into public water supplies and expose the public to unacceptable levels of Site-related contaminants. Movement of contaminants from the groundwater to surface water via seeps has the potential to also expose human and ecological receptors to contaminants if no action is taken. Under Alternative 1, contaminated groundwater would be allowed to continue to migrate in the aquifer, potentially impacting downgradient receptors. Therefore, this alternative would not be protective of human health and the environment. Because Alternative 1 would not be protective of human health and the environment and fails the threshold criteria, it is eliminated from further consideration under the remaining eight criteria.

Both Alternatives 2 and 3 would provide adequate protection of human health and the environment by extracting and treating contaminated groundwater within the AOHC. By eliminating migration of the highest levels of contamination from the AOHC, Alternatives 2 and 3 would prevent contaminated groundwater within the AOHC from impacting downgradient pathways and receptors, including MSW-08, residential properties, and ecological receptors.

Compliance with ARARs

This criterion addresses whether a remedy will meet federal and state ARARs and/or whether there are grounds for invoking a waiver.

Applicable requirements are “those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA Site. Only those state standards that are identified by a state in a timely manner and that are more stringent than federal requirements may be applicable.” (NCP, at 40 C.F.R. § 300.5). Relevant and appropriate requirements are “those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that, while not ‘applicable’ to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA Site, address problems or situations sufficiently similar to those encountered at the CERCLA Site that their use is well suited to the particular site” (NCP, at 40 C.F.R. § 300.5).

To meet the requirements of Section 121(d) of CERCLA, remedial actions must comply with ARARs unless a waiver is justified. ARARs are used to help determine the appropriate extent of Site cleanup that is necessary to develop remedial alternatives, and to govern the implementation of a selected response action.

Section 121(d)(4)(A) of CERCLA provides that EPA may select an action that does not meet an ARAR if the selected action “is only part of a total remedial action that will attain such level or standard of control when completed.” The proposed action is an early interim remedial action and will be part of a total remedial action for contaminated groundwater at the Site. While the final remedial action will seek to restore the aquifer to beneficial use, this early interim remedial action seeks limited action to prevent migration of contaminated groundwater from the AOHC and reduce the volume of contaminated groundwater at the Site. The early interim remedial action will support the final remedial action. The final remedial action will be selected at some time in the future following completion of the RI/FS.

Groundwater cleanup levels will be selected in the final ROD for OU2. Because this is an early interim action which does not seek complete restoration of the aquifer, EPA is waiving, and this early interim remedial action will not meet, ARARs establishing groundwater cleanup standards. Specifically, EPA is waiving the requirement that COCs in Site groundwater meet their respective MCLs and non-zero Maximum Contaminant Level Goals (“MCLGs”) established under the Safe Drinking Water Act, 40 U.S.C. §§ 300f, et seq. These requirements are waived in this early interim remedial action pursuant to the interim action waiver set forth in Section 121(d)(4)(A) of CERCLA and 40 CFR § 300.430(f)(1)(ii)(C)(1).

For Alternatives 2 and 3, all the components of the groundwater extraction system would comply with Federal and State ARARs that have not been waived as required under Section 121(d) of CERCLA.

Major ARARs include:

- Substantive requirements of relevant portions of 40 C.F.R. Parts 122 and 25 Pa. Code § 92, governing the establishment of limits on the discharge of contaminants to surface water from groundwater extraction and treatment.
- Federal and State regulations covering dust suppression, erosion control, disposal requirements and other construction-related activities.

A detailed list of all ARARs identified for this interim remedial action is included in Table 2.

Long-Term Effectiveness and Permanence

This criterion considers the ability of an alternative to maintain protection of human health and the environment over time. The evaluation takes into account the residual risk remaining from untreated waste at the conclusion of remedial activities, as well as the adequacy and reliability of containment systems and institutional controls.

For both Alternatives 2 and 3, groundwater treatment is expected to achieve long-term effectiveness and permanence assuming the treatment system is properly operated and maintained. The proposed components of the GETS have been utilized at sites with the same COCs at similar concentrations. The GETS, as currently envisioned, would be effective in reducing the contaminant mass within the AOHC and controlling plume migration. GETS operation would require continued maintenance.

Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment

This evaluation criterion addresses the statutory preference for selecting remedial actions that employ treatment technologies that permanently and significantly reduce the toxicity, mobility, or volume of the hazardous substances as their principal element. This preference is satisfied when treatment is used to reduce the principal threats at a Site.

For both Alternatives 2 and 3, the GETS would control the mobility of the contaminants by establishing hydraulic capture. The contaminated water would be treated by the GETS, thereby reducing the toxicity and volume of the contaminants in groundwater.

Short-term Effectiveness

This evaluation criterion addresses the effects of the alternative during the construction and implementation phase until remedial action objectives are met. It considers risk to the community and on-Site workers (i.e., personnel implementing the action) and available mitigation measures, as well as the time frame for attainment of the response objectives.

For both Alternatives 2 and 3, construction of the GETS would pose short-term impacts to the surrounding community, which includes residents and commercial workers, and on-Site workers constructing the GETS. It is anticipated that construction activities would last less than one year. During this time, a Site-specific health and safety plan would be in place; such plan would specify how the surrounding community and on-Site workers would be protected against potential dermal contact and inhalation of vapors during construction of extraction wells and the treatment plant. Proper site-access controls and air monitoring during installation of extraction wells would minimize the risks of the residents and commercial workers in the surrounding community from being exposed to dust and potential VOC vapors. Site workers would be protected from these potential exposures through the use of proper personal protective equipment and proper workplace safety procedures. EPA anticipates that there would not be a significant detrimental effect to the community from the increased noise or the increased road traffic during the drilling and construction activities. Minimal effort would be required to establish and enforce exclusion zones during Site work. If the GETS is located in a wetlands area, erosion and sediment controls would be used to mitigate runoff and minimize damage to the wetlands.

Implementability

This criterion considers the technical and administrative feasibility of implementing an alternative and the availability of services and materials required during implementation.

Alternative 2 is more implementable than Alternative 3. For Alternative 2, all of the materials and services needed for the GETS are standard and are readily available from multiple vendors. For Alternative 3, the Photo-Cat system is provided by only one vendor. As a result, work backlog or other factors affecting this one vendor could negatively affect project implementability. The Photo-Cat technology also has many moving parts and controls, which could result in multiple points of failure that could impact system startup, operation, and maintenance. In addition, because Alternative 2 utilizes separate technologies to treat 1,4-dioxane and Cr[VI], it has the flexibility to remove treatment of 1,4-dioxane if treatment is proven to be unnecessary, which would simplify the treatment train and make the alternative more implementable. Alternative 3 would require the use of the Photo-Cat technology to treat Cr[VI] even if 1,4-dioxane does not require treatment. Once the Photo-Cat system is configured, commissioned, and fully automated, it is anticipated that operation of Alternative 3 would be less labor intensive than Alternative 2.

Long-term access would be needed for the treatment plant building. Obtaining such access would be a challenging component to building the treatment system for both Alternatives 2 and 3. Another challenging component of both Alternatives 2 and 3 is the construction of the treatment plant building on the soft soils of the forested wetland, if that location is chosen. A proven technology (helical anchors/piles) would be used to overcome this technical issue. However, placement of the building in a wetlands area would trigger legal requirements governing wetlands mitigation, which would further complicate implementation of the alternative. Construction of an access road to the GETS would also be necessary for both Alternatives 2 and 3, depending on the location of the treatment plant building. Timing and interfacing of different technologies are significant factors, and the installation of each unit by separate contractors would have to be coordinated and supervised. As stated in the previous paragraph, this may adversely affect the implementability of Alternative 3 as the single source of the Photo-Cat system may limit the availability of the system and may subsequently delay installation of other components of the remedy.

The approximate time to construct both Alternatives 2 and 3 is one year after the remedial design has been completed, contingent on Photo-Cat availability. During the remedial design phase, bench-scale studies and other Site investigations would be conducted to assist in the design of the extraction system and treatment train and would be documented in a comprehensive report.

Cost

Capital, annual operation and maintenance (“O&M”), and present worth costs were developed for all alternatives. Capital costs include construction, engineering design, construction management, administration and contingency costs. O&M costs are expressed as the present worth of the estimated annual O&M costs of the remedy throughout the life of the project. To offer an accurate comparison with Alternative 3, the cost estimate for Alternative 2 assumes that all Site COCs will require treatment, which corresponds to Scenario 1. Table 3 provides a summary of the costs of Alternatives 2 and 3.

Table 3: Cost Summary for Remedial Alternatives

Alternative	Description	Capital Costs	O&M Costs (Present Worth)	Total Cost (Present Worth)
2	Groundwater Extraction and Treatment with Air Stripping, UV Oxidation, Ion Exchange, and Carbon Adsorption	\$1,619,000	\$6,492,000	\$8,111,000
3	Groundwater Extraction and Treatment with Air Stripping, Photo-Cat, and Carbon Adsorption	\$2,190,000	\$6,782,000	\$8,972,000

State/Support Agency Acceptance

PADEP concurred with the selection of Alternative 2 in a letter dated June 27, 2017.

Community Acceptance

EPA held a 30-day public comment period from October 1, 2016 through October 31, 2016 to accept public comments on the remedial alternatives presented in the PRAP and on the other documents contained in the administrative record file compiled in support of this early interim remedial action. On October 18, 2016, EPA held a public meeting to discuss the PRAP and accept comments. A transcript of this meeting is included in the administrative record. In addition to comments received during the public meeting, EPA received two written submissions via postal mail. No comments were received which disagreed with EPA's preferred alternative. The topic of concern expressed in the written comments pertained to the location of the treatment building and the potential adverse impacts to businesses on the Property. A summary of significant comments received during the public comment period and EPA's responses are included in the Responsiveness Summary which is a part of this ROD.

11.0 SELECTED REMEDY

Following review and consideration of the information in the administrative record supporting selection of this early interim remedial action, the requirements of CERCLA and the NCP, public comments, and State acceptance, EPA has selected Alternative 2 (Groundwater Extraction and Treatment with Air Stripping, UV Oxidation, Ion Exchange, and Carbon Adsorption) as the early interim remedial action for the AOHC at OU2 of the Site.

11.1 Summary of the Rationale for the Selected Remedy

The early interim remedial action selected for the AOHC at OU2 of the Site is Alternative 2 (Groundwater Extraction and Treatment with Air Stripping, UV Oxidation, Ion

Exchange, and Carbon Adsorption). As discussed in Section 9.1 of this ROD, the specific treatment technologies to be employed in the treatment train will be determined during remedial design. Alternative 2 has been selected because it satisfies the threshold criteria for selection and provides a better mix of tradeoffs under the primary balancing criteria than Alternative 3. Alternative 2 is preferred because it is considered more implementable than Alternative 3 and at a lower cost.

Alternative 2 is considered more implementable than Alternative 3 because all of the materials and services needed for the GETS are standard and are readily available from multiple vendors. In addition, because Alternative 2 utilizes separate technologies to treat 1,4-dioxane and Cr[VI], treatment of 1,4-dioxane could be removed from if treatment is proven to be unnecessary, which would simplify the treatment train and make the alternative more implementable. The capital costs and operation and maintenance costs for Alternative 2 are also less than for Alternative 3.

Alternative 2 will prevent further migration of contaminated groundwater from the AOHC and will begin restoring the groundwater to beneficial use by reducing the volume of contaminated groundwater within the AOHC.

Groundwater contamination from the Site has the potential to impact a public water supply well, residential homes via vapor intrusion, and ecological receptors in a downgradient wetland. By extracting and treating groundwater within the AOHC, Alternative 2 will prevent further migration of contamination towards these locations and receptors. Alternative 2 will comply with ARARs that are not waived for this early interim remedial action. Alternative 2 will also provide a high degree of long-term effectiveness and permanence and will reduce the mobility and volume of contaminated groundwater through treatment. Alternative 2 will pose short-term impacts to the surrounding community due to increased vehicle traffic and noise from treatment during drilling and construction activities. However, proper engineering and administrative controls during installation of extraction wells and construction of the GETS will minimize the risks of workers and the community being exposed to dust and VOC vapors. Erosion and sediment controls will be used to mitigate runoff and minimize damage to the wetlands.

11.2 Description of the Selected Remedy and Performance Standards

Based on the comparison of the nine criteria, EPA's selected early interim remedial action for the AOHC at OU2 of the Site is Alternative 2 (Groundwater Extraction and Treatment with Air Stripping, UV Oxidation, Ion Exchange, and Carbon Adsorption). The total present worth cost of EPA's selected early interim remedial action is \$8,111,000. The major components of the selected early interim remedial action are:

- Construction of an extraction/treatment system to extract groundwater from the AOHC to prevent further migration of contaminants within the AOHC from migrating outside the AOHC;

- Treatment of contaminated groundwater and discharge of treated groundwater to Cooks Run;
- Long-term monitoring.

11.2.1 Construction of an extraction/treatment system to extract groundwater from the AOHC to prevent further migration of contaminants within the AOHC from migrating outside the AOHC

Installation of approximately ten extraction wells with a total estimated pumping rate of 100 gpm will be necessary to prevent further migration of contaminated groundwater from the AOHC. Operation of the extraction wells will meet the RAOs described in Section 8.0. The exact number, location, depth and pump rate of extraction wells will be determined during the remedial design phase. The extracted groundwater from the unconfined overburden, shallow bedrock, and semiconfined bedrock aquifer will be treated by a groundwater extraction and treatment system (“GETS”).

A treatment building will be constructed to house the GETS to treat extracted groundwater sufficiently to permit discharge into surface water. Assuming all treatment components are required, the building will need to be approximately 40-feet by 40-feet in plan view and approximately 20 feet tall. The actual components that will be included in the treatment train will be determined during the remedial design phase. Depending on the exact location of the treatment building, additional considerations will need to be addressed. If the soil is too soft for a typical foundation, helical anchor/piles will need to be installed to bedrock to support the foundation of the building. If the location is in an area that is currently inaccessible for the types of vehicles that will be needed to construct and conduct operation and maintenance, an access road will need to be constructed.

Performance Standards for Construction of Extraction/Treatment System

1. The GETS shall prevent the migration of the COCs in groundwater within the AOHC from migrating outside the AOHC.
2. Construction of the extraction/treatment system, access roads and other activities which would disturb soils shall be conducted in accordance with the substantive portions of Pennsylvania regulations governing erosion and sediment control (25 PA Code §§ 102.4(b)(1) and (4), 102.11, 102.22).
3. Construction of the extraction/treatment system will be performed in a manner that minimizes, to the extent practicable, adverse impacts on the operation of businesses located near the treatment system.
4. Air monitoring shall be conducted during construction activities. Emission controls shall be implemented to comply with regulations governing fugitive air emissions (40 C.F.R. §§ 50.6-50.7, 25 PA Code §§ 123.1(a) and (c), 123.2, 123.31, and 123.41).

5. Construction activities that would potentially impact wetlands areas shall comply with Executive Order No. 11990 requiring the avoidance of adverse impacts from the destruction or loss of wetlands.
6. Construction activities which impact wetlands areas shall comply with substantive portions of 40 C.F.R. § 230.93 and 25 Pa. Code §§ 105.1, 105.17, 105.18a and 105.20a, which govern compensatory mitigation of wetlands.

11.2.2 Treatment of contaminated groundwater and discharge of treated groundwater to a surface water body

Contaminated groundwater that is extracted by the GETS described in section 11.2.1 will be treated to permit discharge to Cooks Run. Within the treatment system, the extracted water will initially go through bag filters to remove suspended solids. A UV oxidation system will then be used to treat 1,4-dioxane. However, if additional study during the design stage concludes that treatment of 1,4-dioxane is not present at levels that would require treatment prior to discharge to surface water, the UV oxidation system will be removed from the treatment train. Without the presence of the UV oxidation system, the GAC will likely receive higher VOC concentrations. As a result, a low-profile air stripper or tray aerator will be used to treat VOCs. If it is determined that emission of VOCs present an unacceptable risk to human health or the environment, the off-gas from the air stripper will be treated using vapor-phase GAC vessels.

After passing through the UV oxidation system or the air stripper, the water will run through an ion exchange system to treat the Cr[VI]. To treat the remaining VOCs and PFASs, liquid-phase GAC vessels will be installed to treat the water effluent from the ion exchange units.

Performance Standards for Treatment of Contaminated Groundwater and Discharge of Treated Groundwater to a Surface Water Body

1. Groundwater shall be treated and discharged to meet the substantive requirements of Pennsylvania Water Quality Standards (25 Pa. Code §§ 93.6, 93.7(a) and (b), 93.8c(a) and 25 Pa. Code §§ 16.24, 16.32-16.33, 16.51, 16.102 and Part 16, Appendix A Table 1A).
2. Influent and effluent sampling shall be conducted according to NPDES substantive requirements. Depending on the number of technologies included in the treatment train, additional sampling will be conducted to monitor effectiveness and estimate breakthrough curves.
3. Spent GAC from both the vapor and liquid streams shall be tested to determine if it is hazardous. If the spent GAC is determined to be hazardous, it shall be stored on-Site and subsequently disposed of in accordance with RCRA and Pennsylvania Hazardous Waste Management regulations.

4. Air emissions from the treatment system shall meet substantive portions of Pennsylvania regulations governing Construction, Modification, Reactivation, and Operation of Sources (25 Pa. Code § 127.1)

11.2.3 Long-term monitoring

Groundwater will continue to be monitored to ensure the GETS operates in accordance with the RAOs.

Performance Standards for Long-Term Monitoring

1. A long-term groundwater monitoring program shall be implemented, which includes monitoring well locations and the extraction wells, that would be sampled semiannually for the first five years of operation and annual monitoring thereafter. These monitoring locations will be divided between the unconfined overburden, unconfined shallow bedrock, and semiconfined bedrock aquifer.
2. Groundwater monitoring shall be performed periodically to confirm that the GETS has established and maintained an inward hydraulic gradient within the AOHC and that concentrations of groundwater COCs are not increasing outside of the AOHC.

11.3 Summary of the Estimated Remedy Costs

The estimated present worth cost of the selected early interim remedial action is \$8,111,000. The information in the cost summary table (Table 3) is based on the best available information regarding the anticipated scope of the response action. This is an order-of-magnitude engineering cost estimate that is expected to be within +50 to -30 percent of the actual project cost. Changes in the cost elements may occur as a result of new information and data collected during the engineering design of the selected remedial action.

11.4 Expected Outcomes of the Selected Remedy

This section presents the expected outcomes of the selected early interim remedial action in terms of resulting land and groundwater uses and risk reduction achieved as a result of the response action.

Implementation of the selected early interim remedial action will prevent further migration of contaminated groundwater from the AOHC, and will begin restoration of the groundwater to beneficial use by reducing volume of contaminated groundwater within the AOHC.

By preventing further migration of contaminated groundwater from the AOHC, risks to downgradient receptors will be reduced. Contaminated groundwater within the AOHC will

be restricted from flowing to private drinking water wells and MSW-08, which will prevent direct contact to the contaminated groundwater. Additionally, contaminated groundwater within the AOHC will be restricted from migrating to surface water via seeps, which will prevent the potential exposure of human and ecological receptors to contaminants. Finally, contaminated groundwater within the AOHC will be prevented from reaching residential areas to the southwest and west of the Site, which will reduce the potential for exposure to the public through the vapor intrusion pathway.

The removal of contaminated groundwater from the AOHC will also begin the restoration of the groundwater at the Site and will potentially reduce the time it will take to clean up contaminated groundwater over the entire Site.

The selected early interim remedial action will be consistent with the subsequent remedial actions which will address the remaining contaminated soils and contaminated groundwater at the Site.

12.0 STATUTORY DETERMINATIONS

Under CERCLA, selected remedies must protect human health and the environment, comply with ARARs that are not waived, be cost-effective and use permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. Additionally, CERCLA includes a preference for remedies that use treatment to significantly and permanently reduce the volume, toxicity or mobility of hazardous substances, pollutants, and contaminants as their principal element. The following sections discuss how the selected interim remedial action for OU2 of the Site meets these statutory requirements.

12.1 Protection of Human Health and the Environment

The selected early interim remedial action will protect human health and the environment by preventing the further migration of contaminated groundwater within the AOHC from migrating outside of the AOHC through the operation of the GETS. The selected remedial action will prevent contamination within the AOHC from impacting downgradient pathways and receptors, including MSW-08, residential properties, and ecological receptors.

12.2 Compliance with Applicable or Relevant and Appropriate Requirements

The selected early interim remedial action will comply with ARARs that are not waived. Because this is an early interim action which does not seek complete restoration of the aquifer, EPA is waiving, and this early interim remedial action will not meet, ARARs establishing groundwater cleanup standards (see "Compliance with ARARs" within Section 10.0 of this ROD). These requirements are waived in this early interim remedial action pursuant to the interim action waiver set forth in Section 121(d)(4)(A) of CERCLA and 40 CFR § 300.430(f)(1)(ii)(C)(1).

ARARs for this early interim remedial action that are not waived would include, among others, Federal and State regulations covering dust suppression, erosion control, disposal requirements and other construction-related activities. Other ARARs for this early interim remedial action that are not waived include Federal and State regulations covering discharge of contaminants to surface water from groundwater extraction and treatment. The selected remedial action will attain all ARARs that are identified in Section 10.0 and specified in Table 2 of this ROD.

12.3 Cost Effectiveness

Section 300.430(f)(1)(ii)(D) of the NCP, 40 C.F.R. § 300.430(f)(1)(ii)(D), requires EPA to evaluate cost-effectiveness by comparing all the alternatives meeting the threshold criteria - protection of human health and the environment and compliance with ARARs - against long-term effectiveness and permanence; reduction of toxicity, mobility or volume through treatment; and short-term effectiveness (collectively referred to as “overall effectiveness”). The NCP further states that overall effectiveness is then compared to cost to ensure that the remedy is cost effective and that a remedy is cost effective if its costs are proportional to its overall effectiveness.

EPA concludes, following an evaluation of these criteria, that the selected remedial action is cost-effective in providing overall protection in proportion to cost and meets all other requirements of CERCLA. The estimated present worth cost for the selected remedy is \$8,111,000.

12.4 Utilization of Permanent Solutions and Alternative Treatment Technologies to the Maximum Extent Practicable

The selected early interim remedial action utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable. Extraction and treatment of contaminated groundwater within the AOHC will permanently eliminate the threats to human health and the environment by permanently removing the contaminants from the extracted groundwater. The selected remedial action does not include alternative treatment technologies. However, the proven technologies used in the selected remedial action achieve risk reduction and protectiveness in the most cost effective manner.

12.5 Preference for Treatment as a Principal Element

The selected remedial action employs treatment as a principal element. The UV oxidation system, air stripping unit, ion exchange unit, and GAC will treat contamination in the extracted groundwater.

12.6 Five-Year Review Requirements

Because this remedial action will result in hazardous substances remaining on-Site above levels that allow for unlimited use and unrestricted exposure (i.e., contaminated groundwater outside of the AOHC and contaminated soil, surface water and sediment), a

statutory review will be conducted every five years after initiation of the remedial action to ensure that the remedial action is protective of human health and the environment pursuant to CERCLA Section 121(c) and the NCP, 40 C.F.R. § 300.430(f)(4)(ii).

13.0 DOCUMENTATION OF SIGNIFICANT CHANGES

There have been no significant or fundamental changes to the proposed remedy as a result of public comments.

III. RESPONSIVENESS SUMMARY

***CHEM-FAB SUPERFUND SITE
OPERABLE UNIT 2
EARLY INTERIM REMEDIAL ACTION***

DOYLESTOWN BOROUGH, BUCKS COUNTY, PENNSYLVANIA

**CHEM-FAB SUPERFUND SITE
OPERABLE UNIT 2
EARLY INTERIM REMEDIAL ACTION
DOYLESTOWN, BUCKS COUNTY, PENNSYLVANIA**

RESPONSIVENESS SUMMARY

1. INTRODUCTION

This Responsiveness Summary provides a summary of significant public comments and concerns regarding the Proposed Plan for early interim remedial action at the Chem-Fab Superfund Site ("Site") Operable Unit 2 ("OU2") and provides the U.S. Environmental Protection Agency's ("EPA") responses to those comments. After reviewing and considering all public comments received during the public comment period, EPA has selected an early interim remedial action to address groundwater contamination at OU2 of the Site.

The Proposed Plan and supporting documentation were made available to the public in the administrative record file compiled to support selection of this remedial action. EPA provided notice to the public that the administrative record file could also be viewed at the following locations:

Bucks County Free Library
150 South Pine Street
Doylestown, PA 18901
Hours: Call (215) 348-9081

EPA Administrative Records Room
Administrative Coordinator
1650 Arch Street
Philadelphia, PA 19103
Phone: (215) 814-3157
Hours: Monday-Friday 8:30 am to 4:30pm
By appointment only

EPA issued a public notice in the *Intelligencer*, a Bucks County newspaper, on October 6, 2016 which contained a list of the components of EPA's preferred alternative, information relevant to the duration of the public comment period, the date of the public meeting, and the availability of the Proposed Plan and the administrative record file. The 30-day comment period began on October 1, 2016 and ended at midnight, October 31, 2016.

EPA conducted a public meeting in Doylestown, Pennsylvania to inform local officials, interested citizens and other stakeholders in attendance about EPA's proposed cleanup plan and the Superfund process, to respond to questions and to receive comments on the Proposed Plan. The public meeting was held by EPA on October 18, 2016 at the Doylestown Borough Hall located at 57 West Court Street, Doylestown, Pennsylvania. Responses to the comments received at the public meeting and during the public comment period are included in this Responsiveness Summary.

This Responsiveness Summary provides a comprehensive summary of significant questions, comments, concerns, and responses by summarizing oral and written comments received during

the public comment period and EPA's responses. Section 2 of the Responsiveness Summary contains general comments received from commenters and EPA's responses. Section 3 contains more specific and detailed comments along with EPA's responses. In section 3, the comments have been grouped into the following categories:

- Effect of Location of Extraction Wells on Location of Treatment Building
- Impact of Groundwater Contamination and Early Interim Remedial Action on Neighboring Properties
- Impact of Locating the Treatment Building on the former Chem-Fab Property
- Decision-Making Process for Location of the Treatment Building
- Effect of Future Remediation Work on Location of the Treatment Building
- Community Advisory Group
- Pennsylvania Department of Environmental Protection Involvement

2. GENERAL COMMENTS

2.1 Location of Treatment Building

Two commenters have expressed concern over the location of the treatment system and potential impacts on the neighboring businesses.

EPA Response: EPA is studying the relative costs of each potential location to determine the most cost-effective way to implement the remedy. However, EPA will also consider other factors in addition to cost to determine the location of the treatment building. EPA intends to implement the selected remedial action so that impacts to businesses are minimized to the extent practicable.

3. DETAILED QUESTIONS, COMMENTS AND CONCERNS

3.1 Effect of Location of Extraction Wells on Location of Treatment Building

One commenter expressed concern that without knowing the location of the extraction wells, it would be difficult to determine which location of the treatment building would be most cost-effective.

EPA Response: EPA and PADEP have collected enough groundwater data to determine that the groundwater underlying the former Chem-Fab property and neighboring self-storage facility contains the highest levels of contaminants at the Site. As a result, they have designated these properties as the Area of Highest Contamination ("AOHC"), which is the focus of the OU2 early interim remedial action. In order to meet the Remedial Action Objectives ("RAOs") for the remedial action, all extraction wells will be located within the AOHC. While the exact location and number of extraction wells will still need to be determined during the remedial design phase, the location of the extraction wells should not significantly impact the cost to run piping to the various proposed locations for the treatment building, since each of the potential locations for the treatment plant is located relatively close to the AOHC.

EPA will also take other factors in addition to cost into account when determining the best location for the treatment system, including minimizing the impact on local businesses to the extent practicable.

3.2 Impact of Groundwater Contamination and Early Interim Remedial Action on Neighboring Properties

One commenter asked about the extent of the groundwater contamination and asked if the remedial action would cause the groundwater to move away from the Site.

EPA Response: The primary purpose of this remedial action is to prevent further migration of contamination from the AOHC. EPA currently has monitoring wells as far south as West Street, and has detected low levels of contamination in these wells. EPA is installing additional wells further south to determine the extent of the groundwater plume. The remedial action calls for groundwater to be pumped up from the extraction wells, treated, and then discharged to a surface water body. Therefore, it is not anticipated that groundwater currently within the AOHC would migrate from the AOHC during implementation of the remedial action. However, this remedial action is not intended to treat all groundwater at the Site. Groundwater outside of the AOHC is outside the scope of this remedial action and the migration of groundwater outside of the AOHC may not be impacted by this action. EPA will address all groundwater in a future final remedial action for OU2.

3.3 Impact of Locating the Treatment Building on the Former Chem-Fab Property

One commenter raised concerns over the impact of locating the treatment building on the former Chem-Fab property. The commenter expressed concern with the impact on parking, air emissions from the treatment system, noise, and the duration of operation.

EPA Response: The selected remedial action will be implemented to minimize impacts to businesses, including those on the former Chem-Fab property, to the extent practicable. This includes studying how much parking would be lost at each location from both the treatment system and vehicles needed to service the system and how that would impact the businesses. Regarding the air emissions, EPA will meet all applicable or relevant and appropriate requirements ("ARARs") with regard to air emissions from the treatment system, which includes utilizing granular activated carbon ("GAC") to scrub the air effluent from the treatment system if it is determined that these emissions present an unacceptable risk to human health. EPA will evaluate potential noise issues during the remedial design and will try to minimize the noise from the treatment system to the extent practicable. With regard to the duration of this remedial action, the RAOs for the remedial action are designed to prevent further migration of contamination from the AOHC and to begin treatment of the contaminated groundwater. EPA has developed this early interim remedial action with the expectation that this would support the final remedial action for the Site. Therefore, this remedial action will need to operate at least until a final remedial action for the Site is selected.

3.4 Decision-Making Process for Location of the Treatment Building

One commenter asked when the decision for the location of the treatment building would be made and how he could stay involved with the process.

EPA Response: A final decision on the location of the treatment system will not be made until the remedial design phase. All members of the community are encouraged to participate and be involved with the Community Advisory Group (“CAG”) for the Site. Members who are interested in joining the CAG may contact EPA Community Involvement Coordinator (“CIC”) Larry Johnson at (215) 814-3239 or johnson.larry-c@epa.gov. EPA currently provides and will continue to provide regular updates to the CAG. Additionally, EPA’s Remedial Project Manager (“RPM”) and CIC are available to discuss the Site with any interested member of the community.

3.5 Effect of Future Remediation Work on Location of the Treatment Building

One commenter asked if the future remediation work that would be conducted further away from the Site would impact where the treatment building would be located.

EPA Response: Because the extraction wells for this remedial action will be located within the AOHC, it is anticipated that the treatment system will need to be located near the extraction wells to be most cost-effective. Since the remedial investigation (“RI”) for the Site is still ongoing, it is difficult to speculate what additional remediation work would be needed beyond the early interim remedial action at this time. However, if future remediation work requires additional extraction wells to be installed, those wells could potentially be connected to the current treatment system, or an additional treatment building could be constructed.

3.6 Community Advisory Group

One commenter mentioned that there is a CAG for the Chem-Fab Site and asked EPA to explain what the CAG is and invite interested residents and business owners to participate.

EPA Response: A CAG is made up of members of the community and is designed to serve as the focal point for the exchange of information among the local community and EPA, the State regulatory agency, and other pertinent Federal agencies involved in cleanup of the Superfund site. There is an active CAG for the Chem-Fab Site that meets quarterly. All members of the community are welcome to participate. Members who are interested in joining the CAG may contact EPA community involvement coordinator Larry Johnson at (215) 814-3239 or johnson.larry-c@epa.gov. EPA’s RPM and CIC are also available to discuss the Site with any interested member of the community. A fact sheet regarding the interim remedy is available as well and can be found on the Doylestown Borough’s website: <http://www.doylestownborough.net/>.

3.7 Pennsylvania Department of Environmental Protection Involvement

One commenter from PADEP mentioned that PADEP will stay involved with the project as it moves through the remedial design and remedial action phases. PADEP will review EPA's design and ensure it complies with Pennsylvania ARARs. Specifically, PADEP will ensure the remedial action complies with regulations governing air emissions and discharge of treated water.

EPA Response: EPA has no response to PADEP's comment other than we look forward to continue to work collaboratively with PADEP and all other stakeholders on the clean-up of the Chem-Fab Superfund Site.

IV. TABLES

***CHEM-FAB SUPERFUND SITE
OPERABLE UNIT 2
EARLY INTERIM REMEDIAL ACTION***

DOYLESTOWN BOROUGH, BUCKS COUNTY, PENNSYLVANIA

Table 1
Identification of Groundwater COPCs and Maximum Detected Concentrations

Chemical	Screening Value (µg/L)	Basis	Maximum Historical Value Detected (µg/L)	Well ID Maximum Detection	Date
1,1,1-Trichloroethane	200	Drinking Water MCL	1320	SB-05	1/5/2000
1,1,2,2-Tetrachloroethane	0.076	Tapwater RSL	3	MW-05	9/10/2002
1,1,2-Trichloroethane	0.041	Tapwater RSL	10	MW-05	9/10/2002
1,1-Dichloroethene	7	Drinking Water MCL	280	MW-16	5/6/2002
1,1-Dichloroethane	2.8	Tapwater RSL	148	SB-34	1/13/2000
1,2-Dichlorobenzene	30	Tapwater RSL	45.1	SB-05	1/5/2000
1,2-Dichloroethane	0.17	Tapwater RSL	13	OW-09	1/13/2014
1,4-Dichlorobenzene	0.48	Tapwater RSL	5.09	SB-13	1/6/2000
Benzene	0.46	Tapwater RSL	8	MW-05	9/10/2002
Bromodichloromethane	0.13	Tapwater RSL	3	MW-05	9/10/2002
Carbon tetrachloride	0.46	Tapwater RSL	13	MW-14	9/19/2007
Chloroform	0.22	Tapwater RSL	160	MW-04	9/17/2002
cis-1,2-Dichloroethene	3.6	Tapwater RSL	6740	SB-05	1/5/2000
Ethylbenzene	1.5	Tapwater RSL	1260	SB-05	1/5/2000
Methylene chloride	5	Drinking Water MCL	9700	MW-04	5/16/2002
o-Xylene	19	Tapwater RSL	530	MW-04	7/9/2003
Tetrachloroethene	4.1	Tapwater RSL	4330	SB-05	1/5/2000
Toluene	110	Tapwater RSL	604	SB-05	1/5/2000
Trans-1,2-Dichloroethene	36	Tapwater RSL	90	MW-05	5/14/2002
Trans-1,3-Dichloropropene	0.47	Tapwater RSL	50	SB-04	1/4/2000
Trichloroethene	0.28	Tapwater RSL	35000	MW-04	9/17/2002
Vinyl Chloride	0.019	Tapwater RSL	56	SB-04	1/4/2000
Xylenes	19	Tapwater RSL	6700	SB-05	1/5/2000
1,4-dioxane	0.46	Tapwater RSL	40	MW-16	9/21/2007
Naphthalene	0.17	Tapwater RSL	69.6	SB-05	1/5/2000
Aluminum	2000	Tapwater RSL	4080	MW-07	1/8/2002
Antimony	0.78	Tapwater RSL	842	MW-07	1/8/2002
Arsenic	0.052	Tapwater RSL	160	MW-04	8/11/2004
Barium	380	Tapwater RSL	8640	MW-10	8/12/2004
Beryllium	2.5	Tapwater RSL	47.2	MW-07	1/8/2002
Cadmium	0.92	Drinking Water MCL	23.8	MW-07	1/8/2002
Chromium	0.035	Tapwater RSL	240000	MW-04	9/17/2002
Hexavalent chromium	0.035	Tapwater RSL	233000	MW-04	5/16/2004
Cobalt	0.6	Tapwater RSL	5170	MW-07	1/8/2002
Copper	80	Tapwater RSL	5600	SB-05	1/5/2000
Iron	1400	Tapwater RSL	55100	DW	1/9/2002
Lead	15	Drinking Water MCL	339	SB-13	1/6/2000
Manganese	43	Tapwater RSL	35800	MW-10	7/6/2001
Mercury	0.063	Tapwater RSL	1.3	MW-04	5/16/2002
Nickel	39	Tapwater RSL	13500	MW-07	1/8/2002
Selenium	10	Tapwater RSL	24.7	MW-04	5/16/2002
Silver	9.4	Tapwater RSL	16.8	MW-04	4/22/2010
Thallium	0.02	Tapwater RSL	63.8	MW-03	10/24/2001
Vanadium	8.6	Tapwater RSL	82.1	OW-05	4/15/2009
Zinc	600	Tapwater RSL	1490	MW-07	1/8/2002
Perfluorooctanic acid (PFOA)	0.04	Lifetime Health Advisory*	0.211	MW-45	12/9/2015
Perfluorooctane sulfonic acid (PFOS)	0.04	Lifetime Health Advisory*	1.9	MW-40A	1/14/2014

Notes:

µg/L - micrograms per liter

COPC - contaminant of potential concern

MCL - Maximum Contaminant Level

RSL - regional screening level (November 2015)

*Based on reference dose and combined Hazard Quotient of 0.1 in May 2016 EPA Office of Drinking Water Health Advisory for PFOA/PFOS

SB - groundwater sample collected from temporary piezometer

OW - groundwater sample collected from monitoring well screened in the overburden

MW - groundwater sample collected from monitoring well screened in bedrock

Table 2
Applicable or Relevant and Appropriate Requirements
Chem-Fab Superfund Site, Doylestown, PA

ARAR	Legal Citation	ARAR Class	Requirement Synopsis	Applicability to Selected Remedy
Chemical Specific ARARs				
A. Water Pennsylvania Water Quality Standards	25 Pa. Code §§ 93.6, 93.7(a) and (b), 93.8c(a)	Relevant and Appropriate	These are specific water quality criteria established pursuant to Section 304 of the CWA. These provisions set the concentrations of pollutants that are allowable at levels that preserve human health based on water and fish ingestion and to preserve aquatic life. Ambient water quality criteria may be relevant and appropriate to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) cleanups based on uses of a water body.	The discharge of treated groundwater will be required to meet the requirements established for protection of human health and aquatic life.

**Table 2
Applicable or Relevant and Appropriate Requirements
Chem-Fab Superfund Site, Doylestown, PA**

ARAR	Legal Citation	ARAR Class	Requirement Synopsis	Applicability to Selected Remedy
Groundwater Withdrawal Regulations	18 C.F.R. §§ 430.7, 430.9, 430.15(b)(1) and (2)	Relevant and Appropriate	Governs the withdrawal of water and operation of groundwater wells withdrawing water from the Delaware River Basin where the Site is located	Wells utilized to undertake groundwater withdrawals at the Site will meet these standards
Wetland Protection and Mitigation	40 C.F.R. § 230.10	Applicable	No discharge of dredged or fill material into an aquatic ecosystem is permitted if there is a practicable alternative that would have less adverse impact on the aquatic ecosystem; causes or contributes to violations of State water quality standards; violates any applicable toxic effluent standard; jeopardizes continued existence of a species; violates any requirement to protect a marine sanctuary; or if it will cause or contribute to significant degradation of the waters of the U.S. No discharge of dredge or fill material shall occur unless appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem	These regulations shall be triggered if the treatment plant is located in the wetland and a "discharge of fill material" occurs within the meaning of 40 C.F.R. § 230.2
Compensatory Mitigation for Loss of Aquatic Resources	40 C.F.R. § 230.93	Relevant and Appropriate	Describes the standards and criteria for establishing compensatory mitigation of wetlands	Minor disruption to potential wetlands may occur during the construction and operation of the treatment building
Dam Safety and Waterway Management	Substantive requirements of 25 Pa. Code §§ 105.1; 105.17; 105.18a; and 105.20a	Relevant and Appropriate	Establishes criteria for placing structures and conducting activities in wetlands	Minor disruption to potential wetlands may occur during the construction and operation of the treatment building

Table 2
Applicable or Relevant and Appropriate Requirements
Chem-Fab Superfund Site, Doylestown, PA

ARAR	Legal Citation	ARAR Class	Requirement Synopsis	Applicability to Selected Remedy
Action-Specific ARARs				
A. Water				
Pennsylvania Water Quality Toxics Management Strategy	25 Pa. Code §§ 16.24, 16.32 – 16.33, 16.51 and 16.102	Applicable	These regulations provide standards and criteria for protection of human health and aquatic life in waters of the Commonwealth.	The groundwater treatment system will comply with the substantive requirements of these discharge standards.
Clean Water Act (CWA)	25 Pa. Code § 16 Appendix A Table 1A 40 C.F.R. § 122.41(a)(1), (d), (e); 122.44(a)(1), (b)(1)(first sentence), (d), (e), (i)(1), and (k); 122.45(a), (e)-(f)	Relevant and Appropriate	Establishes effluent limitations for discharges to waters of Pennsylvania and the United States.	The groundwater treatment system will comply with the substantive requirements of these provisions.
Pennsylvania National Pollutant Discharge Elimination System Requirements	25 Pa. Code §§ 92a.11, 92a.12(a), 92a.41(a)(4) and (5), 92a.41(c), 92a.44, 92a.45, 92a.61(d), (e), and (i)			
Pennsylvania Stormwater Management Act	32 P.S. § 680.13	Applicable	Requires implementation of storm water control measures to prevent injury to health, safety, or property.	Storm water controls will be implemented and maintained during construction of the remedy

Table 2
Applicable or Relevant and Appropriate Requirements
Chem-Fab Superfund Site, Doylestown, PA

ARAR	Legal Citation	ARAR Class	Requirement Synopsis	Applicability to Selected Remedy
B. Soil				
Erosion and Sediment Control	25 Pa. Code §§102.4(b)(1) and (4), 102.11, 102.22	Applicable	Identifies erosion and sediment control requirements and criteria for activities involving land clearing, grading and other earth disturbances and establishes erosion and sediment control criteria.	These regulations apply to construction activities at the Site that disturb the ground surface including clearing, grading, excavation, or well installation.
C. Wastes				
Resource Conservation and Recovery Act (RCRA)	40 C.F.R. § 262.34 (accumulation time and requirements) 40 C.F.R. §§ 264.171-175 (containers) (as incorporated by 25 Pa. Code § 262a.10 and 25 Pa. Code § 264a.1	Relevant and Appropriate	These provisions govern the accumulation time for storage of hazardous wastes and management of containers.	These requirements must be followed for any groundwater treatment remedy that generates and stores hazardous waste.
EPA-authorized Pennsylvania Hazardous Waste Management Regulations	25 Pa. Code §§ 262a.34, 264a.173, 265a.179			
D. Air				
Fugitive Air Emissions	40 C.F.R. § 50.6 – 50.7 25 Pa Code §§ 123.1(a) and (c), 123.2, 123.31, 123.41	Applicable	Establishes the fugitive dust regulation for particulate matter.	Any construction and/or excavation activities will comply with the substantive requirements of these regulations.
Construction, Modification, and Reactivation, and Operation of Sources	25 Pa Code § 127.1	Applicable	Establishes the requirements for the use of best available technology on new air pollutant emissions sources.	Any construction and/or excavation activities as well as any treatment alternative that would result in the emission of site contaminants to the air, such as air stripping, will comply with the substantive requirements of these regulations.

V. FIGURES

***CHEM-FAB SUPERFUND SITE
OPERABLE UNIT 2
EARLY INTERIM REMEDIAL ACTION***

DOYLESTOWN BOROUGH, BUCKS COUNTY, PENNSYLVANIA

Figure 1
Site Layout

Legend

- Drainage Ditch
- Creek
- ▨ Area of Highest Groundwater Concentration (AOHC)
- ▭ Former 10,000-Gallon UST
- ▭ Former AST Farm
- ▭ Self-Storage Facility
- ▭ Former Chem-Fab Facility

Notes
 Backhoe fracture strike from northeast to southwest (approximately N45°E), with a dip of approximately 10 degrees to the northwest
 AST—aboveground storage tank
 UST—underground storage tank

Prepared by: J. J. JENSEN, New York, NY 10019-3335
 Date: 10/22/02
 Scale: 1" = 200' (Horizontal)
 Scale: 1" = 20' (Vertical)
 200' North Arrow

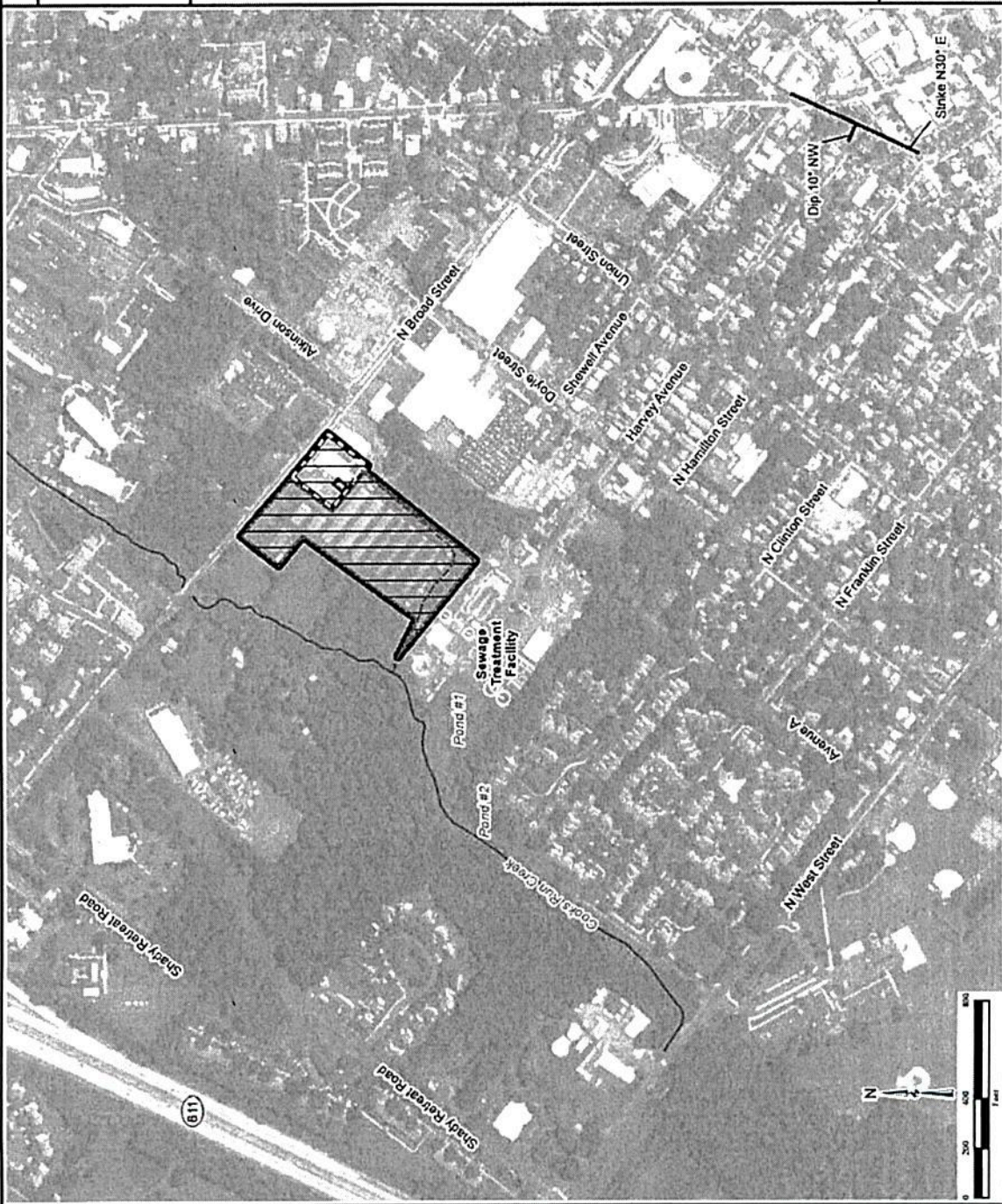


Figure 2
January/February 2014
TCE
Unconfined Overburden Groundwater
Isoconcentration Contours

- Legend**
- L/O Monitoring Well
 - Drainage Ditch
 - Creek
 - OW-07
1.000
TCE Concentration (µg/L)
 - 100 —
TCE Concentration Contour (µg/L)
(dashed where inferred)
 - Area of Highest
Groundwater Concentration (AOHC)
 - Former 10,000-Gallon LUST
 - Former AST Farm
 - Self-Storage Facility
 - Former Chem-Fab Facility

Notes
Below, fracture was struck from northeast to southwest (approximately N30°E) with a dip of approximately 10 degrees to the northeast.
*Data from April 2010
µg/L = microgram per liter
AST = above ground storage tank
TCE = trichloroethylene
† - The study is an analytical for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and included measurement observation.
HST = underground storage tank

Client: HGL/PA Dept./Chem-Fab, L01077233
Title: Focused Feasibility Study of Overburden and Superfund Site, PA, E.P.A. 4007031
Scale: NAD 83, UTM
NAD 83, UTM



Figure 5
January/February 2014
PCE
Unconfined Overburden Groundwater
Isoconcentration Contours

- Legend**
- UO Monitoring Well
 - Drainage Ditch
 - Creek
 - Well Identification
 - PCE Concentration (µg/L)
 - 100— PCE Concentration Contour (µg/L) (dashed where inferred)
 - ▨ Area of Highest Groundwater Concentration (AOHC)
 - Former 10,000 Gallon UST
 - Former AST Farm
 - Self-Storage Facility
 - Former Chem-Fab Facility

Notes
Fracture well strike from southeast to northwest approximately N07°E, with a dip of approximately 10 degrees to the northeast
*data from April 2010
µg/L = microgram per liter
AST = aboveground storage tank
PCE = tetrachloroethylene
1 = The analysis was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method 119-unconfined overburden
UNI = underground storage tank

Contract # 140107-01
Project # 140107-01
Survey # 140107-01
Scale 1:10,000
Date 1/14/2014


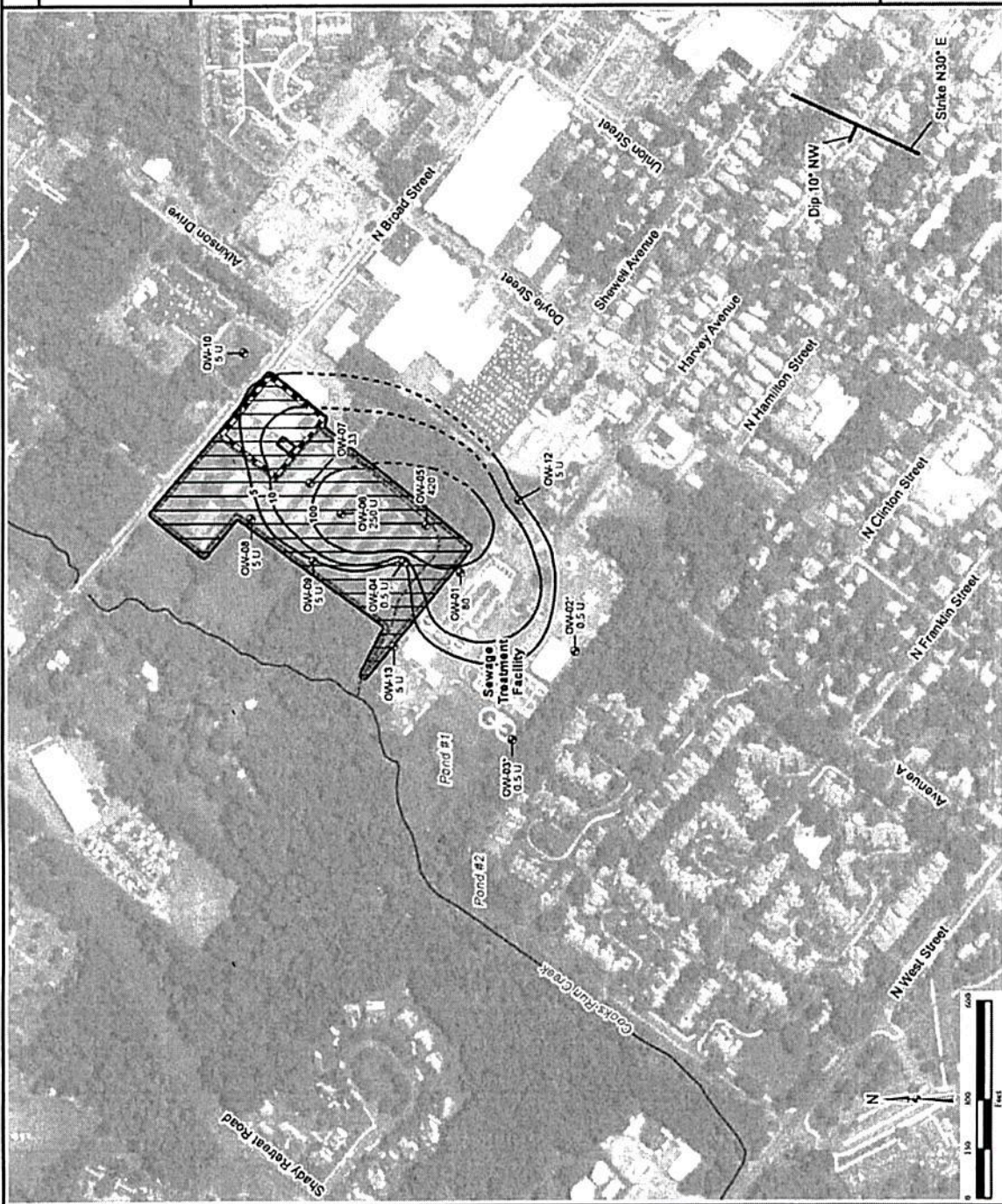



Figure 7
January/February 2014
PCE
Semi-Confined Bedrock Groundwater
Isoconcentration Contours

- Legend**
- SC Monitoring Well
 - Drainage Ditch
 - Creek
 - Well Identification
PCE Concentration (µg/L)
 - PCE Concentration Contour (µg/L)
 - (dashed where inferred)
 - Area of Highest
Groundwater Concentration (AOHC)
 - Former 10,000 Gallon UST
 - Former AST Farm
 - Self-Storage Facility
 - Former Chem-Fab Facility

Notes
Bedrock fracture was strike from northeast to southwest (approximately N30°E), with a dip of approximately 10 degrees to the southwest.
L= data from April 2010
µg/L= microgram per liter
AST= aboveground storage tank
PCE= perchloroethylene
U= unknown quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
I= The analyte was detected, but the result may be biased low
PCE= perchloroethylene
SC= semi-confined bedrock
U= The study is as analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method UST= underground storage tank

Client: Dept. of Environmental Protection
Project: PCE at the Chem-Fab Superfund Site
Survey: 10/12/13, 08/14/14, 01/14/14
Scale: 1"=100'




Figure 9
January/February 2014
Hexavalent Chromium
Unconfined Shallow
Bedrock Groundwater
Isoconcentration Contours

Legend	
	USB Monitoring Well
	Drainage Ditch
	Creek
	Well Identification Hexavalent Chromium Concentration (µg/L)
	Hexavalent Chromium Concentration Contour (µg/L, dashed where inferred)
	Area of Highest Groundwater Concentration (AOIHC)
	Former 10,000-Gallon UST
	Former AST Fann
	Self-Storage Facility
	Former Chem-Fab Facility

Notes:
 Bedrock fracture sets strike from southeast to southwest approximately N70°E, with a dip of approximately 10° to the northeast.
 *Data from April 2010
 µg/L - microgram per liter
 AST - aboveground storage tank
 UST - underground storage tank
 The results in this document are preliminary. The associated numerical values are for informational purposes only. The approximate concentration of the analyte in the sample.
 U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contrast Required Quantitation Limit (CRQL) for sample and method.
 UJ - The analyte was not detected. The reported quantitation limit is approximate and may be inaccurate or incomplete.
 USB - unconfined shallow bedrock
 UST - underground storage tank

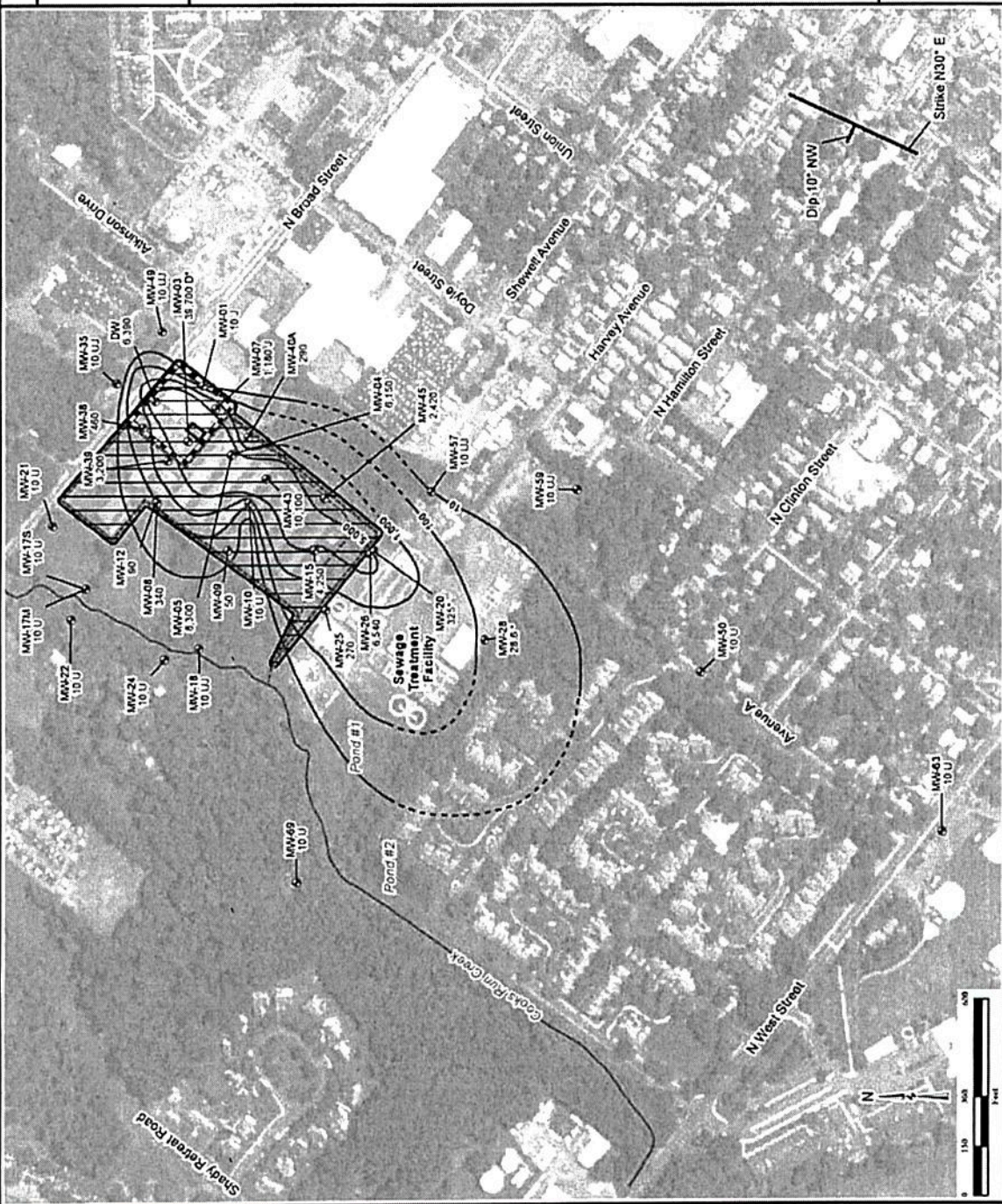


Figure 10
January/February 2014
Hexavalent Chromium
Semiconfined Bedrock Groundwater
Isoconcentration Contours

- Legend**
- SC Monitoring Well
 - Drainage Ditch
 - Creek
 - MW22 190
Well Identification
Hexavalent Chromium Concentration (µg/L)
 - 100
Hexavalent Chromium Concentration Contour
(µg/L, dashed where inferred)
 - Area of Highest
Groundwater Concentration (AOHC)
 - Former 10,000-Gallon UST
 - Former AST Farm
 - Self-Storage Facility
 - Former Chem-Fab Facility

Note:
Bedrock fracture with strike from northeast to southwest (approximately N40°E), with a dip of approximately 10° to the northeast.

*-data from April 2010
µg/L = microgram per liter
AST = aboveground storage tank
SC = semiconfined bedrock
U = The analysis is equal to the level of the adjusted Contour
Required Quantitation Limit (RQL) (per sample analysis)
UJ = The analysis is not equal to the level of the adjusted Contour
UST = underground storage tank

AFZL
HGL



**Figure 11
Remedial Design
Example Layout**

- Legend**
- USB Monitoring Well
 - Proposed Recovery (75 ft-bgs)
 - Proposed Recovery (50 ft-bgs)
 - Well Identification
 - TCE Concentration (µg/L)
 - Drainage Ditch
 - Creek
 - TCE Concentration Contour (Dashed where inferred)
 - Area of Highest Groundwater Concentration (AOHC)
 - Former 10,000-Gallon UST
 - Former AST Farm
 - Self-Storage Facility
 - Former Chem-Fab Facility
 - Potential Water Treatment Building Location
 - Proposed Access Road to Treatment Building
- Notes:**
 - Data from April 2010
 - µg/L - micrograms per liter
 - AST - aboveground storage tank
 - TCE - trichloroethylene
 - U - The study it was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and methods
 - RSL - unconfined shallow bedrock
 - UST - underground storage tank

HGL
 1401 Walnut Street, Suite 200
 Doylestown, PA 19340
 610-341-2200
 www.hgl.com

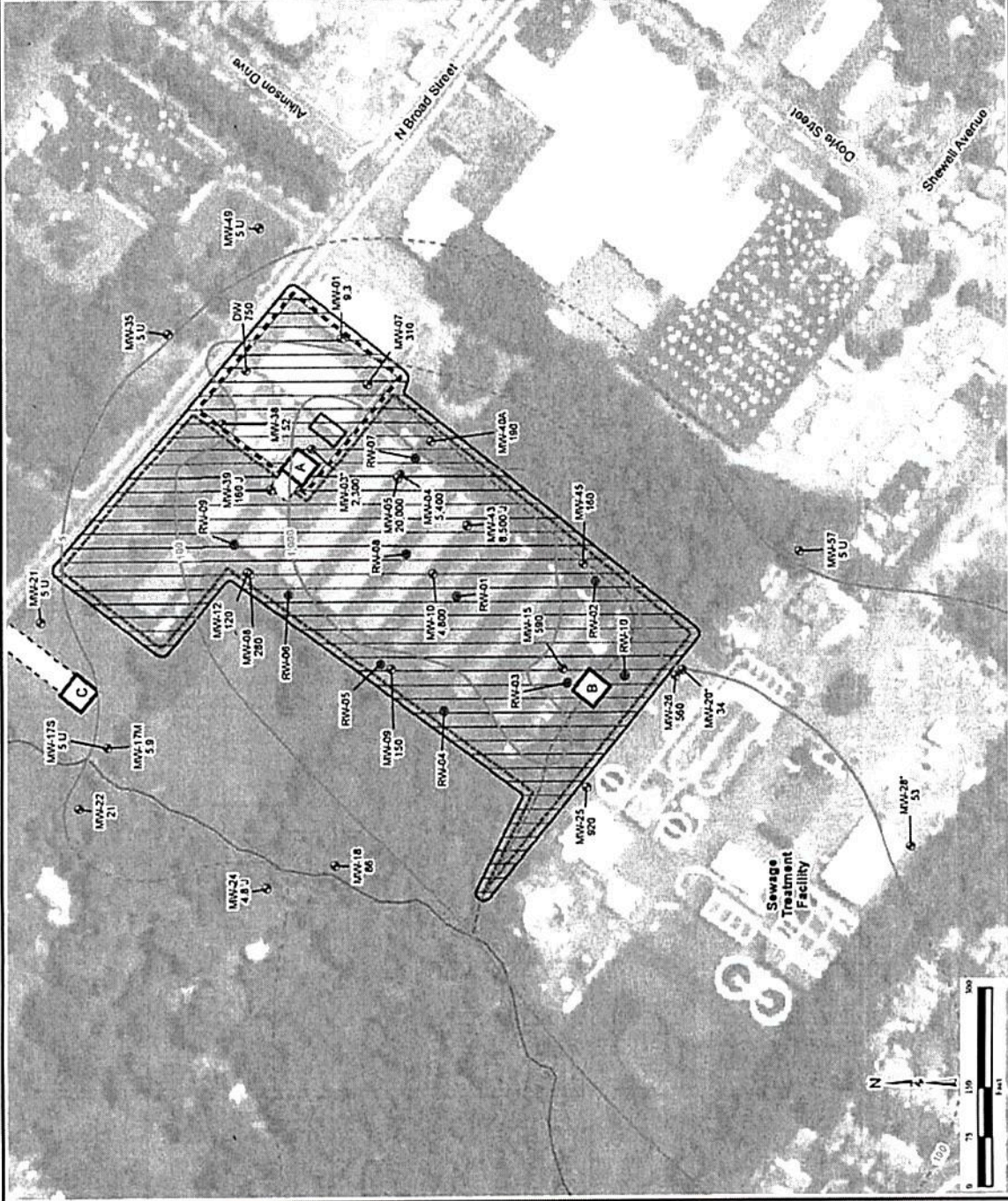
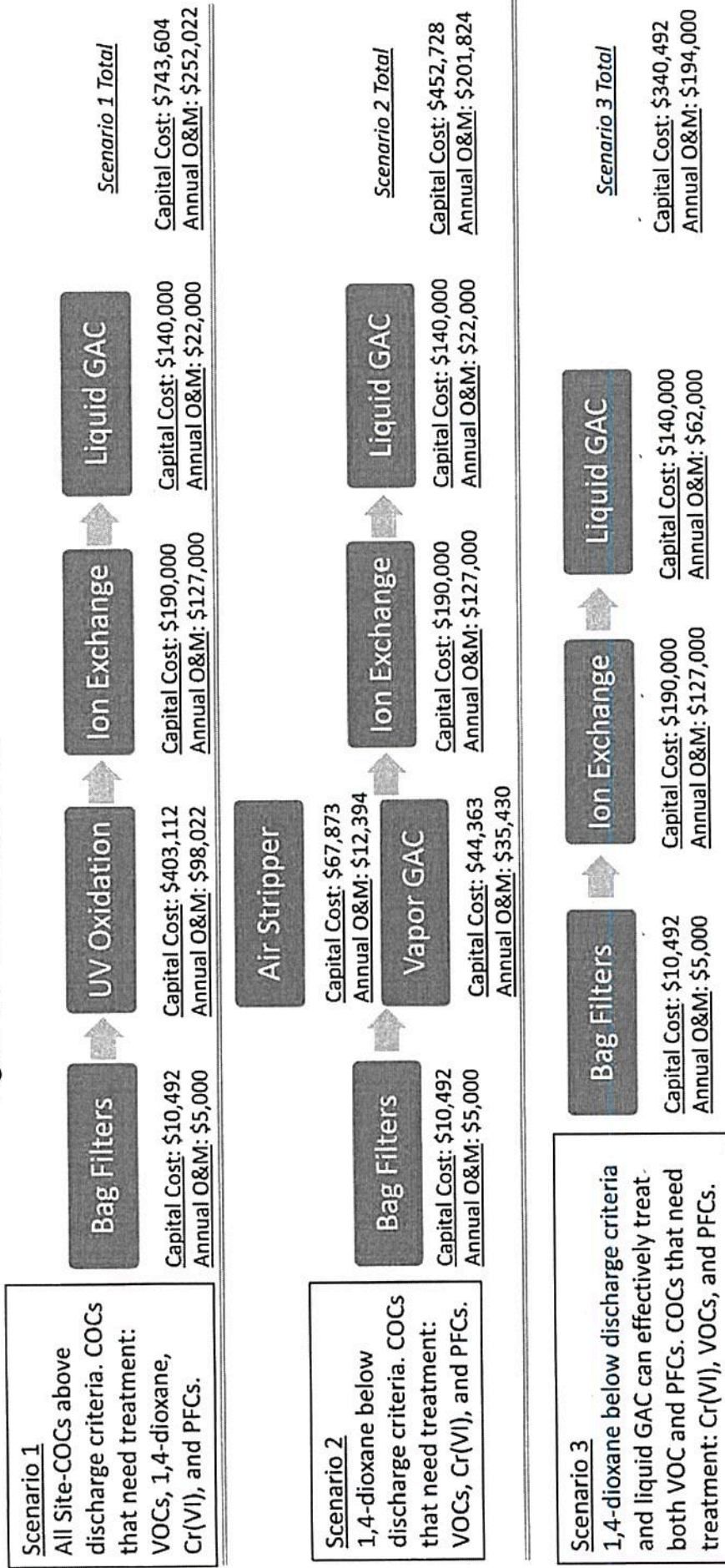



Figure 12 – Alternative 2 Treatment Train Scenarios



Note: The total capital costs presented in this figure do not include capital expenditures associated with the construction, operation, and maintenance of the treatment building. The annual O&M costs are non-labor costs and include only energy and materials costs associated with each individual treatment component.

Reconciliation Pending
Itemized Cost Summary Verification
CHEM FAB, INC., DOYLESTOWN, PA SITE ID = 03 DR
RESPONSE COSTS FROM JULY 11, 1993 THROUGH JUNE 4, 2019
CRP NO. 163345

REGIONAL PAYROLL COSTS	\$1,040,980.71
HEADQUARTERS PAYROLL COSTS	\$2,666.71
REGIONAL TRAVEL COSTS	\$2,444.41
HEADQUARTERS TRAVEL COSTS	\$38.07
DELIVERY OF ANALYTICAL SERVICES	
AXYS (EP133000069)	\$8,200.00
EMERGENCY AND RAPID RESPONSE SERVICE (ERRS2)	
WRS INFRASTRUCTURE & ENVIRONMENTAL SERVICES (EPS31205)	\$915,225.76
EMERGENCY REMOVAL CLEANUP SERVICES (ERCS) CONTRACT	
ENVIRONMENTAL TECHNOLOGY OF NORTH AMERICA/EARTH TECH., INC.	\$258,312.82
GUARDIAN ENVIRONMENTAL SERVICES (EPS31702)	\$82,622.22
ENFORCEMENT SUPPORT AND COMMUNITY INVOLVEMENT SUPPORT SERVICES CONTRACT (ESC)	
CHENEGA TECHNICAL PRODUCTS, LLC (EPS30401)	\$67,663.08
ENFORCEMENT SUPPORT SERVICES	
BOOZ, ALLEN & HAMILTON, INC. (68-W4-0010)	\$1,387.90
CHENEGA GLOBAL SERVICES LLC (EPS30902)	\$15,875.22
CHEROKEE NATION ASSURANCE, LLC (EPS31401)	\$24,832.10
ENVIRONMENTAL MONITORING SYSTEMS LABORATORY (EMSL) COSTS	
LOCKHEED MARTIN SERVICES (EPD05088)	\$41,169.30
ENVIRONMENTAL SERVICES ASSISTANCE TEAMS (ESAT)	
LOCKHEED MARTIN (EPW06016)	\$109,447.86
ICF INCORPORATED, LLC (EPW13023)	\$172,032.57
HAZARDOUS RANKING SERVICE	

Reconciliation Pending
 Itemized Cost Summary Verification
 CHEM FAB, INC., DOYLESTOWN, PA SITE ID = 03 DR
 RESPONSE COSTS FROM JULY 11, 1993 THROUGH JUNE 4, 2019
 CRP NO. 163345

DYNCORP SYSTEMS & SOLUTIONS (68-W0-3016)	\$26,387.35
INTERAGENCY AGREEMENT (IA) COSTS	
***CONTRACT NAME NOT FOUND *** (DW096959086)	\$24,802.51
DEPARTMENT OF INTERIOR (DW14922566)	\$151.26
DEPARTMENT OF INTERIOR (DW14924474)	\$12,427.64
DEPARTMENT OF JUSTICE (DW15796801A)	\$5,339.94
DEPARTMENT OF JUSTICE (DW15796801B)	\$3,902.39
OTHER COSTS	
SRA INTERNATIONAL, INC. (EPW14020)	\$406.65
RESPONSE ACTION CONTRACT (RAC2)	
HYDROGEOLOGIC INC. (EPS30705)	\$2,436,905.27
EA ENGINEERING (EPS30707)	\$391,141.82
SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM (START)	
ROY F. WESTON, INC. (68-S5-3002)	\$7,308.40
SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM (START2)	
TETRA TECH EM INC. (EPS30502)	\$73,436.85
WESTON SOLUTIONS (EPS31005)	\$241,396.04
SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM (START3)	
WESTON SOLUTIONS, INC. (EPS31502)	\$104,624.84
TECHNICAL ASSISTANCE TEAM (TAT) CONTRACT COSTS	
ROY F. WESTON, INC. (68-W0-0036)	\$24,562.54
CONTRACT LAB PROGRAM (CLP) COSTS	
FINANCIAL COST SUMMARY	\$561,764.93
MISCELLANEOUS COSTS (MIS)	\$43,347.19
EPA INDIRECT COSTS	\$5,150,947.99

Reconciliation Pending
Itemized Cost Summary Verification
CHEM FAB, INC., DOYLESTOWN, PA SITE ID = 03 DR
RESPONSE COSTS FROM JULY 11, 1993 THROUGH JUNE 4, 2019
CRP NO. 163345

TOTAL SITE COSTS BEFORE COST RECOVERY COLLECTIONS	\$11,851,752.34
COLLECTIONS/ADJUSTMENTS	(\$14,867.00)
Total Site Costs:	<u>\$11,836,885.34</u>



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

ORIG



NOTICE OF POTENTIAL LIABILITY
URGENT LEGAL MATTER: PROMPT REPLY REQUIRED
CERTIFIED MAIL: RETURN RECEIPT REQUESTED

DEC 06 2007

Turog Properties LTD.
Heywood Becker, Manager
PO Box 78
Quakertown, PA 18951-0078

Re: Chem-Fab Site, Doylestown, Bucks County, Pennsylvania

Dear Mr. Becker:

This letter notifies Turog Properties LTD. (hereinafter "you") that you may incur, or may have incurred, liability under Section 107(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9607(a), with respect to the Chem-Fab Site ("Site") located in Doylestown, Pennsylvania. This letter also notifies you of potential response actions at the Site which you may be asked to perform or pay for at a later date if the United States Environmental Protection Agency ("EPA") performs them. Based on information presently available to EPA, EPA has determined that you may be responsible under CERCLA for cleanup of the Site; or for reimbursing EPA for costs it has incurred or will incur in cleaning up the Site.

BACKGROUND

CERCLA, commonly known as the Federal Superfund law, was enacted in 1980, and has been reauthorized and amended in 1986, and reauthorized again in 1990. Since then, CERCLA has several key objectives, including setting priorities for cleanup of the worst hazardous sites in the country, and determining the parties potentially responsible for investigating, cleaning up or paying the costs of cleaning up such hazardous sites. These parties are referred to as "potentially responsible parties" or "PRPs."

The Chem Fab Corporation began in 1965 as a metal etching operation. It manufactured templates from which printed circuit boards were made. It also performed electroplating. Historical spills and leaks from underground storage tanks have been documented. In 1995, the EPA conducted a removal operation that addressed process chemicals and wastes after it was determined that there was a threat to human health and the environment. Contaminants of concern at the Site include as follows: volatile organic compounds, PCBs, pesticides/herbicides, semi-volatile organics, metals and polyaromatic hydrocarbons.

The Site was proposed for listing on the National Priorities List ("NPL") on September 19, 2007. The NPL is a list of the most serious uncontrolled or abandoned sites at which releases of hazardous substances have occurred or may occur.

EXPLANATION OF POTENTIAL LIABILITY

Under CERCLA, specifically Sections 106(a) and 107(a), 42 U.S.C. §§ 9606(a) and 9607(a), potentially responsible parties ("PRPs") may be required to perform cleanup actions to protect the public health, welfare, or the environment. PRPs may also be responsible for costs incurred by EPA in cleaning up the Site, unless the PRP can show divisibility or any of the other statutory defenses.

PRPs include current and former owners and operators of a site, as well as persons who arranged for treatment and/or disposal of any hazardous substances found at the site, and persons who accepted hazardous substances for transport and selected the site to which the hazardous substances were delivered. Based on the information collected, EPA believes that you may be liable under Section 107(a) (1) of CERCLA with respect to the Chem-Fab Site as the current owner of Parcel 8-5-1-1 of the Site, Tax Map 256 in Bucks County, Pennsylvania.

Under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), commonly known as the federal "Superfund" law, EPA is responsible for responding to the release or threat of release of hazardous substances, pollutants or contaminants into the environment – that is, for stopping further contamination from occurring and for cleaning up or otherwise addressing any contamination that has already occurred. EPA has documented the release or threatened release of hazardous substances, pollutants or contaminants at or from the Site, as those terms are defined in Sections 101(14) and 101(33) of CERCLA, 42 U.S.C. §§ 9601(14) and (33). EPA has spent, or is considering spending, public funds to investigate and control releases of hazardous substances or potential releases of hazardous substances at the Site. Based on information presently available to EPA, EPA has determined that you may be responsible under CERCLA for cleanup of the Site and/or for costs EPA has incurred in cleaning up the Site. Unless EPA reaches an agreement under which one or more of the PRPs will properly perform or finance such actions, EPA may perform these actions pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, or require them to be performed by responsible parties under Section 106 of CERCLA, 42 U.S.C. § 9606.

EPA may order PRPs, or any one of them, to perform response actions deemed necessary by EPA to protect the public health, welfare or the environment. Additionally, PRPs may be liable for all costs incurred by the government in responding to any release or threatened release at the Site, under Sections 104 and 107(a) of CERCLA, 42 U.S.C. §§ 9604 and 9607(a), and the Resource Conservation and Recovery Act ("RCRA"), as amended, 42 U.S.C. §§ 6901 et seq., and other laws. Such actions and costs may include, but are not limited to, expenditures for conducting a RI/FS, conducting a Remedial Design/Remedial Action, and other investigation, planning, response, oversight, and enforcement activities related to the Site. In addition, potentially responsible parties may be required to pay for damages for injury to, destruction of, or loss of natural resources, including the cost of assessing the amount or extent of such damages related to a site.

ORIGINAL

By this letter, EPA notifies you of your potential liability with regard to this matter and encourages it to perform or to finance voluntarily those response activities that EPA determines to be necessary at the Site.

SITE RESPONSE ACTIVITIES

EPA is planning to conduct or have PRPs conduct the following studies at the Site:

1. Remedial Investigation ("RI") - Further investigations to define the nature and extent of soil, air, ground water, surface water and sediment contamination at the Site and to identify the local hydro-geological characteristics and impact on biotic receptors at the Site; and,
2. Feasibility Study ("FS") - A study to evaluate possible remedial actions to remove or contain hazardous substances, pollutants, and contaminants at the Site.

In addition to the above, you may be asked at a later date to undertake, or may be liable for, any additional measures necessary to protect public health, welfare, or the environment. Such measures may include but are not limited to:

1. Implementing expedited response actions, e.g., securing the Site to prevent contact with any hazardous substances that may be present at the Site and/or removal of contaminated material from the surface of the Site;
2. Designing and implementing the EPA-approved remedial action; and,
3. Providing any monitoring and maintenance necessary after the remedial action is completed.

EPA may expend additional funds for response activities at the Site under the authority of CERCLA and other laws.

DE MINIMIS SETTLEMENTS

Under Section 122(g) of CERCLA, whenever practicable and in the public interest, EPA may offer special settlements to parties whose waste contribution to a site is minimal in volume and toxicity, that is, de minimis parties.

Individuals or businesses resolving their Superfund liability as de minimis parties are not typically required to perform site cleanup. Instead, EPA requires de minimis settlers to pay their fair share of cleanup costs incurred, plus a "premium" that accounts for, among other things, uncertainties associated with the costs of work to be performed in the future. In return, de minimis settlers receive: (1) a covenant not to sue, which is a promise that EPA will not bring any future legal action against the settling party for the specific matters addressed in the settlement; and (2) contribution protection, which provides a settling party with protection from

being sued by other responsible parties for the specific matters addressed in the settlement. Participation in a de minimis settlement means that you are settling directly with EPA as soon as it is possible to do so.

If you believe that you may be eligible for a de minimis settlement at this Site, please contact Joan E. Martin-Banks, Civil Investigator, at 215-814-3156 for additional information on "De Minimis Settlements."

FINANCIAL CONCERNS/ABILITY TO PAY SETTLEMENTS

EPA is aware that the financial ability of some PRPs to contribute toward the payment of response costs at a site may be substantially limited. If you believe, and can document, that you fall within that category, please contact Joan E. Martin Banks, Civil Investigator, for information on "Ability to Pay Settlements." In response, you will receive a package of information about the potential for such settlements and a form to fill out with information about your finances, and you will be asked to submit financial records including business federal income tax returns. Also, please note that, because EPA has a potential claim against you, you must include EPA as a creditor if you file for bankruptcy.

ADMINISTRATIVE RECORD

Pursuant to CERCLA Section 113(k), 42 U.S.C. §9613(k), the United States establishes an administrative record that contains documents that form the basis for EPA's decision on the selection of each response action for a site. The administrative record will be available to the public for inspection and comment before EPA selects a remedy. A copy of the record will be available at the Bucks County Library, Library Center, 150 S. Pine Street, Doylestown, PA 18901 Telephone (215) 348-9081. Another copy will be located at the EPA Regional office, 1650 Arch Street, Philadelphia, Pennsylvania 19103. Telephone (215) 814-3157. The contact person for comments on the record will be provided with the record when such record is available for review at these locations.

Upon completion of the public comment period and EPA's review of the comments, EPA will select the remedy for the Site. The selection of the remedy will be documented in a Record of Decision (ROD), which will also become part of the administrative record.

PRP RESPONSE AND EPA CONTACT

Your response regarding: (1) your willingness to enter into negotiations, or (2) information about why you may not be a PRP should be sent within **thirty (30) calendar days** of the date of this letter. If you have any questions about this letter, please contact Joan E. Martin Banks for information pursuant to the potentially responsible party search at 215-814-3156. Legal questions can be referred to Leigh Rendé, Assistant Regional Counsel, at 215-814-2668. Technical questions can be referred to Huu Ngo, Remedial Project Manager, at 215-814-3187.

ORIGINAL

Your response should be addressed to:

Huu Ngo, Remedial Project Manager (3HS21)
U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103

Thank you for your prompt attention to this matter.

Sincerely,



Karen Melvin, Associate Division Director
Office of Enforcement
Hazardous Site Cleanup Division

cc: Leigh Rendé, Esq. (3RC41)
Huu Ngo (3HS21)
Craig Olewiler, PADEP
Lois Lauria (3HS42)

ORIGINAL

Prior Recipient of General Notice Letter on 07/30/2007

Laser Diode, Incorporated
Rollin Ball, Director
2 Olsen Avenue
Edison, NJ 08820

NOTICE OF POTENTIAL LIABILITY
URGENT LEGAL MATTER: PROMPT REPLY REQUIRED
CERTIFIED MAIL: RETURN RECEIPT REQUESTED

ORIG.

Turog Properties LTD.
 Heywood Becker, Manager
 PO Box 78
 Quakertown, PA 18951-0078

Re: Chem-Fab Site, Doylestown, Bucks County, Pennsylvania

Dear Mr. Becker:

This letter notifies Turog Properties LTD. (hereinafter "you") that you may incur, or may have incurred, liability under Section 107(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9607(a), with respect to the Chem-Fab Site ("Site") located in Doylestown, Pennsylvania. This letter also notifies you of potential response actions at the Site which you may be asked to perform or pay for at a later date if the United States Environmental Protection Agency ("EPA") performs them. Based on information presently available to EPA, EPA has determined that you may be responsible under CERCLA for cleanup of the Site; or for reimbursing EPA for costs it has incurred or will incur in cleaning up the Site.

BACKGROUND

CERCLA, commonly known as the Federal Superfund law, was enacted in 1980, and has been reauthorized and amended in 1986, and reauthorized again in 1990. Since then, CERCLA has several key objectives, including setting priorities for cleanup of the worst hazardous sites in the country, and determining the parties potentially responsible for investigating, cleaning up or paying the costs of cleaning up such hazardous sites. These parties are referred to as "potentially responsible parties" or "PRPs."

The Chem Fab Corporation began in 1965 as a metal etching operation. It manufactured templates from which printed circuit boards were made. It also performed electroplating. Historical spills and leaks from underground storage tanks have been documented. In 1995, the EPA conducted a removal operation that addressed process chemicals and wastes after it was determined that there was a threat to human health and the environment. Contaminants of concern at the Site include as follows: volatile organic compounds, PCBs, pesticides/herbicides, semi-volatile organics, metals and polyaromatic hydrocarbons.

	J. Martin Banks	L. Rende	CONCURRENCES	H. Gray	L. Janson
SYMBOL	3HS62	3RC41		3RC41	3HS62
SURNAME	JMB	L.R.			L.J.
DATE	10/24/07	11/22/07			11/30/07

U.S. Postal Service
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OFFICIAL USE

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Resitit (Endors)
Total
Sent To

Heywood Becker, Manager
Turog Properties LTD
P.O. Box 78
Quakertown, PA 18951-0078

Street, Apt. No., or PO Box No.
City, State, ZIP+4

ORIGINAL

PS Form 3800, May 2000 See Reverse for Instructions

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- Print your return address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Heywood Becker, Manager
Turog Properties LTD
P.O. BOX 78
Quakertown, PA 18951-0078

COMPLETE THIS SECTION ON DELIVERY

A. Signature ORIGINAL Agent Addressee

B. Received by (Printed Name) M Foster C. Date of Delivery 12-11-07

D. Is delivery address different from item 1? Yes No
If YES, enter delivery address below:

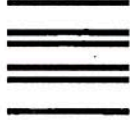
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Joan Martin Banks (3HS62)
Civil Investigator
U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103

JUL 14 2011

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Heywood Becker
Turog Properties Limited
5382 Wismer Road
Pipersville, PA 18947

**Re: Chem-Fab Superfund Site: Administrative Order No.
CERC-03-2011-0209-DC (Access to 300-360 North Broad
Street, Doylestown for Subslab Soil Gas Survey)**

Dear Mr. Becker:

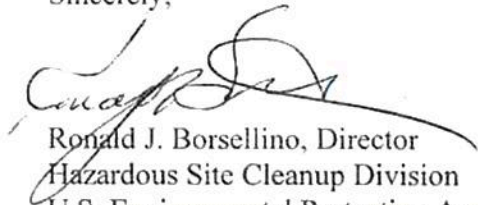
Enclosed please find a true and correct copy of Administrative Order No. CERC-03-2011-0209DC ("Order") issued by the U.S. Environmental Protection Agency ("EPA") to Turog Properties Limited ("Turog") under Section 104(e)(5) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9606(e)(5). The Order directs Turog to, among other things, comply with EPA's request for entry to 300-330 North Broad Street and 350-360 North Broad Street for purposes of performing subslab soil vapor testing and indoor air testing in the two buildings. The Order further prohibits Turog from interfering with the work or any equipment brought onto the property to complete the work, and requires that Turog assist EPA's efforts by providing any information it might have regarding the location of utility pipes beneath the building slabs (*see* Section VII of the Order).

The Order becomes effective 10 days from the date EPA transmits a signed copy to Turog (the date of this letter)(*see* Paragraph 11.1). During this 10-day period Turog may confer with EPA to discuss the Order (Paragraph 16.1). Turog is required to notify EPA in writing within 5 days of the effective date regarding Turog's intention to comply (Paragraph 14.1). The access required by the Order expires 180 days from the effective date of the Order (Paragraph 7.1).

The Administrative Record upon which the Order is issued is available for review at your request. You may make arrangements to review the Administrative Record by contacting Remedial Project Manager Huu Ngo at (215) 814-3187.

If you have any questions regarding the Order or wish to schedule the conference described in Paragraph 16.1 of the Order, please contact EPA Sr. Assistant Regional Counsel Andrew Goldman at (215) 814-2487.

Sincerely,

A handwritten signature in black ink, appearing to read "Ronald J. Borsellino", is written over the typed name and title.

Ronald J. Borsellino, Director
Hazardous Site Cleanup Division
U.S. Environmental Protection Agency
Region 3

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III**

IN THE MATTER OF:	:
	:
300-360 North Broad Street,	:
Doylestown, Pennsylvania	:
(Chem-Fab Superfund Site)	: Docket No. CERC-03-2011-0209DC
	:
Turog Properties Limited,	:
	:
Respondent	:
	:
	:
Proceeding Under Section 104(e)(5)	:
of the Comprehensive Environmental	:
Response, Compensation, and Liability	:
Act, as amended, 42 U.S.C. § 9604(e)(5)	:

**ADMINISTRATIVE ORDER DIRECTING COMPLIANCE
WITH REQUEST FOR ACCESS**

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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III**

IN THE MATTER OF:	:
	:
300-360 North Broad Street, Doylestown, Pennsylvania (Chem-Fab Superfund Site)	: Docket No. CERC-03-2011-0209DC
	:
Turog Properties Limited,	:
	:
Respondent	:
	:
	:
Proceeding Under Section 104(e)(5) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. § 9604(e)(5)	:

ADMINISTRATIVE ORDER FOR ACCESS

I. JURISDICTION

- 1.1 This Administrative Order ("Order") is issued to Turog Properties Limited (hereinafter, "Respondent"), pursuant to the authority vested in the President of the United States by Section 104(e)(5) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9604(e)(5), and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. § 300.400(d)(4). This authority was delegated to the Administrator of the United States Environmental Protection Agency ("EPA") by Executive Order 12580, 52 Fed. Reg. 2923, re delegated to the Regional Administrators of EPA by EPA Delegation No. 14-6, and further delegated to the Director of the Hazardous Site Cleanup Division, EPA Region III, by EPA Region III Delegation 14-6.

II. STATEMENT OF PURPOSE

- 2.1 In issuing this Order, the objective of EPA is for EPA and/or its Authorized Representatives (as defined in Paragraph 7.1 below) to obtain entry and access to certain land and buildings within property located at 300-360 North Broad Street in Doylestown,

Pennsylvania from the Respondent in order to collect samples to determine the extent to which, if at all, vapors from subsurface soil and groundwater contaminated with hazardous substances are entering one or more of the structures located on the property and impacting human health.

III. FINDINGS OF FACT

- 3.1 Respondent Turog Properties Limited is a Pennsylvania limited partnership which owns property and buildings located at 300-360 North Broad Street, Doylestown, Pennsylvania, and further identified in the Bucks County, Pennsylvania Tax Office as Tax Parcel 8-5-1-1 (the "Property"). The Property currently contains three commercial structures corresponding to the following addresses:
- (a) 300-330 North Broad Street: A one-story building of approximately 11,000 square feet with no basement and which contains several tenants ("Building A");
 - (b) 340 North Broad Street: A three-story building with a basement/crawlspace and which contains several tenants ("Building B"); and
 - (c) 350-360 North Broad Street: A two-story building with no basement and which contains several tenants ("Building C").

The Property is approximately depicted in Attachment 1 to this Order. The Property is part of the Chem-Fab Superfund Site, which includes (1) the Property, and (2) all locations to which hazardous substances or pollutants or contaminants present on the Property at any time have migrated.

- 3.2 From the mid-1960s to the late 1970s, Chem-Fab, Inc. (CF), a subsidiary of Harvey Radio Company, Inc., operated an electroplating and metal etching facility on the Property. CF's operations at the Property generated wastes that included metals, chlorinated solvents such as 1,1,1 - trichloroethane ("1,1,1-TCA"), methylene chloride, and trichloroethene ("TCE"), ferric chloride, mineral spirits, chromic acid rinse water and sludge, chromic acid, sulfuric acid, sodium bisulfate, and sodium hydroxide. CF was cited several times during the 1960s and 1970s by the Bucks County Health Department and the Pennsylvania Department of Health for spills and releases of industrial wastes at the Property from above- and below ground tanks and a catch basin to Cooks Run, a nearby creek.
- 3.3 In the late 1970s, CF was acquired by Boarhead Corporation, a business established by Manfred DeRewal, Sr. (DeRewal) to acquire a property, located approximately 20 miles from the Chem-Fab Site, which came to be known as the Boarhead Farms Site. DeRewal also owned DeRewal Chemical Company, Inc. (DCC), which removed, transported, and

- disposed of chemical waste generated by other companies. During the 1970s, DCC disposed of chemical wastes at locations which included the Boarhead Farms Site, a rented warehouse property on Ontario Street in Philadelphia, and the Wissinoming Industrial Park in Philadelphia. During this period, liquid wastes, including hundreds of thousands of gallons of ammonia, hydrochloric acid, and pickle liquor waste, were transported from various industrial entities to the Property for disposal. In addition to CF, two other entities associated with DeRewal--a computer assembly outfit and a gallium reclamation business--operated at the Property for an unknown period of time. CF owned the Property through approximately May 1999.
- 3.4 In August 1987, EPA performed a Preliminary Assessment and Site Inspection of the Doylestown Groundwater Site and the Chem-Fab Site. During this assessment, water samples were collected from residential wells and a municipal well located in the vicinity of the Property. Analytical results indicated that the groundwater in the vicinity of the Property was contaminated with volatile organic contaminants including, among other things, trichloroethene ("TCE") and 1,1-dichloroethene ("1,1-DCE") at levels exceeding drinking water standards. Additional chlorinated solvents were also found in the groundwater including 1,1,1-TCA, tetrachloroethene ("PCE"), 1,1-dichloroethane ("1,1-DCA"), and trans-1,2-dichloroethene ("trans-1,2-DCE").
- 3.5 In or around October 1987, EPA conducted a removal action at the Chem-Fab Site consisting of the delivery of bottled water and carbon filtration units to affected residences and connection of affected residences to public water supplies.
- 3.6 In September 1994, EPA investigated the Chem-Fab Site and collected samples from containers, an underground storage tank, soils, and an excavated sump at the Property. The investigation revealed, among other things, improperly and incompatibly stored drums of hazardous material including flammable liquids and acids stored inside and outside buildings at the Site; contaminated liquid and sludge in a sump located in an on-site warehouse, an underground storage tank containing 6,000 gallons of liquid and sludge found to contain hazardous substances; and two truck trailers containing laboratory equipment and numerous drums and containers.
- 3.7 In 1994-1995, EPA conducted a second removal action at the Chem-Fab Site. During that response EPA removed 117 drums and 8,400 gallons of liquid wastes, including chromium-contaminated wastes from the underground storage tank as well as solid wastes and fuel oils from the Site. During the response action EPA found label information on drums and other containers indicating the presence of xylene, toluene, hydrochloric acid, sulfuric acid, nitric acid, muriatic acid, caustic soda, methyl isobutyl ketone, polymeric isocyanate, benzenesulfonic acid, nickel rinse waste, methylene chloride, ferric chloride, chromate waste acid, and anhydrous ammonia.

- 3.8 In or around November 1998, the Pennsylvania Department of Environmental Protection (“PADEP”) assumed the lead role in further assessing the Chem-Fab Site.
- 3.9 In or around 1999, the Property was acquired at a tax sale by 300 North Broad Street, Ltd., which converted the industrial buildings at the Property for office use.
- 3.10 In 1999-2000, PADEP performed an investigation at the Site and found TCE; PCE, and methylene chloride in soils at the Property as well as chromium; 1,1,1-TCA; 1,1-DCE; 1,1-DCA; methylene chloride, PCE, TCE, vinyl chloride; and cis-1,2-DCE in groundwater at the Site.
- 3.11 In 2001-2002, PADEP conducted additional investigations and found:
 - (a) PCE; TCE; 1,1-DCE; methylene chloride; and chromium (VI) in soils at the Property;
 - (b) chromium (VI) and volatile organic contaminants including; 1,2-dichloroethene (“1,2-DCE), TCE, and PCE in soils beneath Building A; and
 - (c) 1,1,1-TCA; 1,1-DCE; 1,1-DCA; PCE; TCE; cis-1,2-DCE; chloroform; carbon tetrachloride; methylene chloride, and metals including chromium (III) and (VI) and nickel in groundwater at the Site.
- 3.12 In 2003-2004, PADEP collected additional groundwater samples and found concentrations of previously detected contaminants. PADEP also concluded that the groundwater contaminant plume had migrated further downgradient. A surface water sample from the swale on the adjacent Extra Space Storage property exhibited contamination by chromium (VI).
- 3.13 In or around 2005, Respondent acquired the Property by Deed in Lieu of Execution and is the current owner of the Property.
- 3.14 In June 2007, PADEP requested the Agency for Toxic Substances and Disease Registry (“ATSDR”) to perform a health consultation on several exposure pathways at the Chem Fab Site including the vapor intrusion pathway. Based on the detections of VOCs in the soil samples collected previously, ATSDR recommended that “[e]nvironmental agencies should more fully characterize the potential indoor air pathway and vapor intrusion issues.”
- 3.15. EPA proposed the Chem-Fab Site for the CERCLA National Priorities List (“NPL”) in September 2007. The Site was finalized on the NPL in March 2008.

- 3.16 In March and June 2008, PADEP collected indoor air samples from Buildings A, B and C. These samples showed detections of 1,1,1-TCA, TCE and PCE. ATSDR released a Health Assessment in September 2008 which concluded that while the current levels of contaminants in the indoor air posed no apparent public health hazard to the employees or visitors, over time the levels could change and further characterization of the indoor air was necessary.
- 3.17 EPA commenced a Remedial Investigation (“RI”) at the Chem-Fab Site in or around 2009.
- 3.18 On or about October 16, 2009, Mr. Heywood Becker of Turog Properties Limited signed a “Consent to Enter Property” form on behalf of Respondent under which Respondent consented to entry by EPA and the Commonwealth of Pennsylvania and their employees, agents, contractors, and authorized representatives for the purpose of collecting surface water, groundwater, surface soil, and subsurface soil samples at the Property in connection with EPA’s performance of the RI.
- 3.19 By certified letter to Mr. Becker dated November 18, 2010, EPA requested that Respondent consent to entry to the Property for purposes of performing a subslab soil gas survey. The letter indicated that the work would involve, among other things, installation of sample ports through the floor of the basement to facilitate collection of soil gas vapors. The certified letter was received on November 22.
- 3.20 Discussions regarding EPA’s request for entry to the Property occurred between November 2010 and May 2011. During these discussions:
- (a) Respondent clarified that Buildings A and C contained no basement and that sampling activities would damage expensive finished floors in tenant spaces unless EPA agreed to use “slant drilling” to access subslab soils from the exterior of these buildings;
 - (b) EPA advised Respondent that “slant drilling” would not enable EPA to collect samples from soils directly beneath the buildings, that samples from soil accessible using “slant drilling” would therefore not provide meaningful data, and that “slant drilling” was accordingly not an acceptable method for collecting the samples;
 - (c) Respondent suggested that there were closets and utility rooms without finished floors in each tenant space from which sampling might be possible;
 - (d) EPA agreed to use closets and utility rooms to the maximum extent practicable;

- (e) Respondent suggested that sampling in tenant spaces would be disruptive and costly for the tenant businesses;
 - (f) EPA indicated that the testing could be done after hours and at night to minimize disruption to tenant businesses;
 - (g) Respondent inquired whether EPA would pay for new floors damaged by the testing; and
 - (h) EPA explained that Agency policy precludes agreement to conditions on access which impose indemnity or compensatory obligations on EPA, that EPA does not offer compensation to potentially responsible parties for damage arising in the course of a response, and that Respondent had been notified of its status as a potentially responsible party in December 2007.
- 3.21 By letter from Mr. Becker to Mr. Goldman dated February 10, 2011 but postmarked April 13, Mr. Becker transmitted Respondent's signature on an entry form consenting to EPA's request for entry to Building B.
- 3.22 By certified letter from Mr. Goldman to Mr. Becker dated April 22, Mr. Goldman noted that EPA had still not received Respondent's consent to enter Buildings A or C. The letter concluded as follows:

“EPA initially contacted Turog for authorization to enter the property to conduct vapor intrusion sampling by letter dated November 18, 2010. It is now over five months later and the requested access has not been provided. **I need to know, within 5 business days of your receipt of this letter, Turog's position on EPA's request for access to the other buildings (300-330 and 350-360 North Broad Street).** If I do not receive Turog's consent to enter the other buildings to perform the necessary sampling within five (5) business days of your receipt of this letter, EPA will take other steps to gain entry to those buildings to perform the sampling work. Those steps might include, among other things, issuance of an administrative order directing Turog to permit entry for the work and/or a request that the U.S. Department of Justice obtain an administrative warrant authorizing such entry. Costs incurred by the Government to secure entry to conduct the vapor intrusion sampling are response costs for which Turog may be responsible as a potentially responsible party associated with the Chem-Fab Site.”

(Emphasis in original). Mr. Becker signed for the letter on April 26.

- 3.23 By letter from Mr. Becker to Mr. Goldman dated May 2, Mr. Becker indicated that numerous pipes for water, sewage, gas, and electricity had been installed beneath the slab after PADEP completed its testing, that he believed there was no reliable way to locate these utilities, and that drilling beneath the slab would result in substantial risk of harm to the buildings and building occupants. Mr. Becker requested that EPA reconsider its position on drilling into the slab and his proposal that "slant drilling" be used."
- 3.24 After five months of EPA efforts to secure access for the needed environmental testing, including efforts to address Respondent's concerns, Respondent has not consented to EPA's request for entry to Buildings A and C to conduct the necessary environmental testing.
- 3.25 The necessary environmental testing that is the subject of this Order consists of the actions described below and which are included in the access to be provided under Paragraph 7.7 of this Order:
- (a) A visual inspection within each tenant space in Buildings A and C to determine the appropriate location for installation of vapor intrusion sampling ports;
 - (b) A visual inspection within Buildings A and C to identify any products or items which may potentially release vapors and interfere with the accuracy of the investigation;
 - (c) Temporary removal of any items from Buildings A and C which may potentially release vapors and interfere with the accuracy of the investigation;
 - (d) Installation of one or more sampling ports in each first floor tenant space in Buildings A and C by:
 - (i) drilling a small hole (approximately 1/2 inch in diameter) into the floor,
 - (ii) inserting a copper tube through the slab, and
 - (iii) sealing the hole around the tube with concrete,or by such other means as EPA may determine to be effective;
 - (e) Connecting each installed port to a small canister which will collect air through the port for approximately 24 hours and removing the canisters;.
 - (f) Collection of air samples within Buildings A and C;

- (g) Collection of the canisters attached to each sampling port installed in Buildings A and C;
 - (h) Installation of a flush-mounted cap atop each port installed in Buildings A and C to seal the holes; and
 - (i) Returning to Buildings A and C approximately 6 months later to retest by performing the steps described in subparagraphs (e) - (h), above, during the winter months when the buildings are expected to be more airtight as windows and doors are kept closed during heating season.
- 3.26 Collecting the soil gas data from beneath the slab of Buildings A and C by performing the actions described in Paragraph 3.25, above, is necessary to determine the extent to which, if at all, vapor intrusion presents a human health problem within the buildings. EPA has considered alternatives to conducting the subslab sampling and believes that such alternatives will not provide adequate data.
- (a) Taking air samples within the buildings without evaluating the soil gas conditions beneath the slabs will not give EPA a clear picture of existing conditions or of the possibility that Site-related contaminants may present health threats in the future. By themselves, air sample results that show no threat from subslab soils today may not be useful in predicting whether a threat exists in the future as the slab breaks down and/or cracks over time. In addition, air samples alone will not enable EPA to differentiate between contaminants from indoor sources such as cleaning products (to which EPA may not have authority to respond) and Site-related vapors from contaminated groundwater and soil.
 - (b) EPA concludes that it would not be appropriate under these circumstances to require the installation of, or install itself, measures to address the potential presence of soil gas vapors to avoid the need to perform the subslab soil gas testing because the need for such measures has not been determined to exist.
- 3.27 Having evaluated the alternatives, EPA believes that issuing this Order imposes the minimum burden on the Property necessary to obtain information EPA needs to protect public health and welfare in this instance. EPA intends to administer this Order in such manner as will avoid adverse impacts to the Property and the tenant businesses that operate thereon to the maximum extent practicable.

IV. CONCLUSIONS OF LAW

- 4.1 The Chem-Fab Superfund Site, including the Property, is a "facility" within the meaning of Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).
- 4.2 Respondent is a "person" within the meaning of Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).
- 4.3 Respondent is an "owner" as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20).
- 4.4 Hazardous substances, as defined in Sections 101(14) of CERCLA, 42 U.S.C. § 9601(14) have been disposed of at the Site and are currently present there.
- 4.5 The presence of hazardous substances at the Site and the past, present, and/or potential migration of hazardous substances from the Site constitutes an actual and/or threatened "release" into the "environment" within the meaning of Sections 101(8) and 101(22) of CERCLA, 42 U.S.C. §§ 9601(8) and (22).
- 4.6 Section 104(e) of CERCLA, 42 U.S.C. § 9604(e), and Section 300.400(d) of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 C.F.R. § 300.400(d), authorize EPA and the Commonwealth of Pennsylvania and their representatives to have access to the Site to conduct response actions.

V. DETERMINATIONS

Based on the Findings of Fact and Conclusions of Law set forth above, and the Administrative Record supporting issuance of this Order, EPA has determined that:

- 5.1 There is a reasonable basis to believe that there may be or has been a release or a threatened release of hazardous substances at or from the Site.
- 5.2 Access to the Property is needed for EPA and/or its Representatives (as defined in Paragraph 7.1 below) in order for EPA to determine the need for response or choose or take any response action under CERCLA, or otherwise to enforce the provisions of CERCLA.
- 5.3 The actions required by this Order are necessary to protect the public health and welfare and the environment.

- 5.4 EPA has provided the Respondent with notice and opportunity for consultation regarding access as is reasonably appropriate under the circumstances.
- 5.5 Respondent has denied EPA's requests for access to Buildings A and C within the Property for purposes of performing a soil gas survey to determine the nature and extent of risks presented by environmental contamination at the Property.

VI. PARTIES BOUND

- 6.1 This Order shall apply to and be binding upon Respondent and its successors and assigns and upon all persons, contractors and consultants acting under or for either the Respondent or EPA or any combination thereof. No change in ownership or corporate or partnership status relating to the Site will in any way alter the status of the Respondent or its responsibilities under this Order.
- 6.2 In the event of any change in ownership or control of the Property, Respondent shall notify EPA in writing at least thirty (30) days in advance of such change and shall provide a copy of this Order to the transferee in interest of the Property, prior to any agreement for transfer.

VII. ACCESS TO BE PROVIDED

- 7.1 Respondent shall provide to EPA, its officers, employees, agents, consultants, and contractors, representatives of the Commonwealth of Pennsylvania, those acting under orders with EPA and those acting under authorization from the EPA ("EPA and/or its Representatives") ingress and egress to and from Buildings A and C at the Property upon reasonable notice for a period of 180 days from the effective date of this Order for the purpose of conducting response actions as described in Paragraph 7.7, below.
- 7.2 Respondent shall provide to EPA and/or its Representatives access to all portions of Buildings A and C at the Property for all of the purposes deemed necessary by the EPA for the implementation of response actions as described in Paragraph 7.7, below.
- 7.3 Respondent shall not interfere in any way with the activities of EPA and/or its Representatives on the Property during the conduct of the response actions described in Paragraph 7.7, below. Any such interference shall be deemed a violation of this Order.
- 7.4 Respondent shall cooperate with, and assist, EPA's efforts in performing the actions described in Paragraph 7.7, below, by, among other things, providing information EPA needs to contact and arrange entry with the tenants of Buildings A and C and providing information that may be useful in locating utility pipes beneath the slabs of these

buildings.

- 7.5 Respondent shall not interfere with the operation of, or alter or disturb the integrity of, any sampling ports, vapor collection canisters, or other devices placed by EPA and/or its Representatives in Buildings A and C to perform the actions described in Paragraph 7.7, below, nor shall Respondent knowingly permit others to do so. Any such interference shall be deemed a violation of this Order.
- 7.6 All tools, equipment, and other property taken onto or placed upon the Property by EPA and/or its Representatives shall remain the property of EPA and/or its Representatives.
- 7.7 The sampling for which entry is required by this Order includes the following activities:
- (a) A visual inspection within each tenant space in Buildings A and C to determine the appropriate location for installation of vapor intrusion sampling ports;
 - (b) A visual inspection within Buildings A and C to identify any products or items which may potentially release vapors and interfere with the accuracy of the investigation;
 - (c) Temporary removal of any items from Buildings A and C which may potentially release vapors and interfere with the accuracy of the investigation;
 - (d) Installation of one or more sampling ports in each first floor tenant space in Buildings A and C by
 - (i) drilling a small hole (approximately 1/2 inch in diameter) into the floor,
 - (ii) inserting a copper tube through the slab, and
 - (iii) sealing the hole around the tube with concrete,or by such other means as EPA may determine to be effective;
 - (e) Connecting each installed port to a small canister which will collect air through the port for approximately 24 hours and removing the canisters;
 - (f) Collection of air samples within Buildings A and C;
 - (g) Collection of the canisters attached to each sampling port installed in Buildings A and C;

- (h) Installation of a flush-mounted cap atop each port installed in Buildings A and C to seal the holes; and
 - (i) Returning to Buildings A and C approximately 6 months later (but within 180 days of the effective date of this Order) to retest by performing the steps described in subparagraphs (e) - (h), above, during the winter months.
- 7.8 Notwithstanding any provisions of this Order, EPA retains all of its access and information-gathering authorities and rights under CERCLA, and any other applicable statute or regulation.

VIII. EPA PROJECT COORDINATOR

- 8.1 The Project Coordinator for EPA is:

Cindy Santiago (3HS31)
On Scene Coordinator
U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103
(215) 814-3282

- 8.2 EPA shall have the ability to change its Project Coordinator at any time without prior notice to Respondent. EPA's intent is to notify the Respondent as soon as practicable following any such change of its Project Coordinator.
- 8.3 The absence of the EPA Project Coordinator from the Site shall not be cause for the stoppage or delay of the access required by Section VII above, except when such stoppage or delay is specifically required by EPA.

IX. RESERVATION OF RIGHTS

- 9.1 Nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Order, including the right to seek injunctive relief, and the imposition of statutory penalties. Further, nothing herein shall preclude EPA from exercising its access rights as provided by Section 104(e) of CERCLA, 42 U.S.C. § 9604(e).
- 9.2 Nothing in this Order shall limit the authority of the On-Scene Coordinator/Remedial Project Manager as outlined in the NCP and CERCLA.

X. OTHER CLAIMS

- 10.1 Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership, or corporation not bound by this Order for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken from the Site.
- 10.2 Nothing herein shall constitute or be construed as a satisfaction or release from liability of Respondent or any other person.

XI. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

- 11.1 The effective date of this Order shall be ten (10) business days after the date on which a signed copy of this Order is forwarded to Respondent.
- 11.2 This Order may be amended by EPA. Such amendments shall be in writing and shall be effective seven (7) days after the date on which they are signed by EPA.

XII. LIABILITY OF THE UNITED STATES GOVERNMENT

- 12.1 Neither the United States Government nor any agency thereof shall be liable for any injuries or damages to persons or property resulting from acts or omissions of Respondent or of its employees, agents, servants, receivers, successors, or assigns, or of any persons, including, but not limited to, firms, corporations, subsidiaries, contractors, or consultants, in carrying out activities, including, but not limited to, obligations pursuant to this Order, nor shall the United States Government or any agency thereof be held as a party to any contract entered into by Respondent in carrying out activities, including, but not limited to, obligations pursuant to this Order. The actions undertaken by this Order are necessary to mitigate a real and substantial threat to the environment and are necessary to protect public health and safety. The burden imposed on the Property is the minimum necessary to respond to the health and safety threat posed by that property as a result of the real and/or threatened contamination thereon.

XIII. CALCULATION OF TIME

- 13.1 Any reference to "days" in this Order shall mean calendar days, unless otherwise specifically provided herein. The term "business day" shall mean a day other than a Saturday, Sunday, or federal holiday. In computing any period of time under this Order,

where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the next business day.

XIV. NOTICE OF INTENT TO COMPLY

- 14.1 Respondent shall notify EPA in writing within five (5) days after the effective date of this Order as to whether Respondent intends to comply with the terms of this Order. Failure by Respondent to provide notification to EPA of whether Respondent intends to comply within this time period shall be deemed a violation of this Order by Respondent.

XV. TERMINATION AND SATISFACTION

- 15.1 The Respondent's obligations to EPA under this Order shall terminate and be deemed satisfied upon the Respondent's receipt of written notice from EPA that the access required by this Order is no longer needed for the purposes described in Section II and Paragraph 7.7 of this Order.

XVI. OPPORTUNITY TO CONFER

- 16.1 Up to and including the tenth business day following receipt of this Order by Respondent, Respondent may confer with EPA to discuss this Order. The Administrative Record supporting this Order shall be available at that time. The opportunity for this conference shall not affect the Respondent's obligation to comply with the terms of this Order as of its effective date. At any such conference held pursuant to Respondent's request, Respondent may appear by an attorney or other representative. Respondent should contact EPA Sr. Assistant Regional Counsel Andrew Goldman at (215) 814-2487 to arrange such a conference.

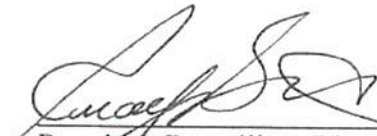
XVII. PENALTIES FOR NONCOMPLIANCE

- 17.1 Respondent is hereby advised that, pursuant to Section 104(e)(5) of CERCLA, 42 U.S.C. § 9604(e)(5), and 40 C.F.R. Part 19, a court may assess civil penalties of up to \$37,500 per day for each day that Respondent unreasonably fails to comply with this Order or any part hereof. In addition, any person who is liable for a release or threat of release of a hazardous substance or pollutant or contaminant and who fails to comply with this Order may be liable for punitive damages in an amount up to three times the amount of any costs incurred by the United States as a result of such failure, as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3).

XVIII. ADMINISTRATIVE RECORD

- 18.1 The Administrative Record supporting this Order is available for inspection at the EPA Region III office in Philadelphia, Pennsylvania. Respondent may arrange to review the record by contacting EPA Remedial Project Manager Huu Ngo at (215) 814-3187.

SO ORDERED.



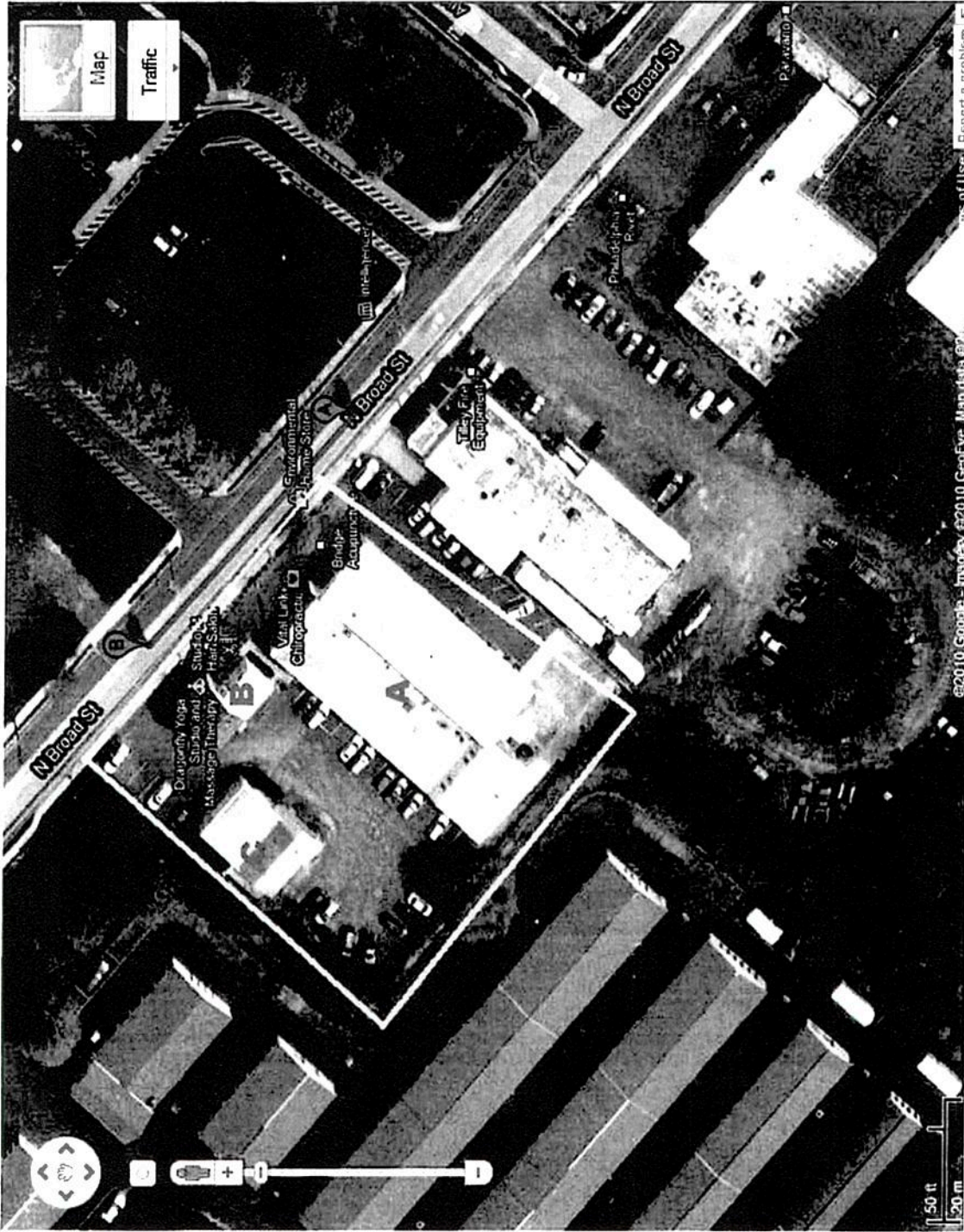
Ronald J. Borsellino, Director
Hazardous Site Cleanup Division
U.S. Environmental Protection Agency
Region III

7/14/11

Date

300-360 North Broad Street, Doylestown, PA (Chem-Fab Site): Administrative Order for Access
Docket No. CERC-03-2011-0209DC

Attachment 1





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

October 16, 2018

VIA HAND DELIVERY

Turog Properties Limited
c/o Heywood Becker
Box 180
Carversville, PA 18913

**Re: Chem-Fab Superfund Site: Administrative Order No.
CERC-03-2017-0140-DC: Compliance Issues**

Dear Mr. Becker:

This letter notifies you of compliance issues regarding the above-described administrative order ("Order") and establishes deadlines for action to be taken by Turog Properties Limited ("Turog"). The Order was issued to ensure that Turog operates and maintains a sub-slab depressurization system (the "Depressurization System") installed by EPA at Turog's Doylestown, Pennsylvania property, which is part of the Chem-Fab Superfund Site.

EPA issued the Order on May 31, 2017. Turog requested a conference and the conference was held on June 22, 2017. The Order became effective ten days following the conference, which was July 2, 2017.

Under the Order, which includes the Work Plan modified by EPA on November 16, 2017, Turog is required to, among other things:¹

¹ The list which follows is not comprehensive. Please consult the Order, its amendments, the EPA-approved Work Plan, and other relevant documents for a description of the requirements of the Order.

- Inspect Depressurization System gauges every 7 days from the effective date;²
- Inspect Depressurization System fans every 7 days from the effective date;³
- Submit progress reports every 90 days from the date EPA approved the Work Plan;⁴
- Submit a draft notice for filing in the land records within 15 days of the effective date;⁵ and
- Submit a certification regarding the destruction of records within 30 days after the effective date.⁶

EPA is concerned with Turog's lack of performance under the Order. First, EPA has received no progress reports. Without such reports EPA has no assurance that Turog has been inspecting the gauges and fans as required by the Order. Progress reports were due on February 14, May 15, and August 13, 2018. We do not know if Turog prepared reports and neglected to submit them or failed to prepare the reports. *Although the next progress report is not due until November 11, 2018, we hereby require that, by close of the tenth business day following your receipt of this letter via hand delivery, Turog either (a) submit any progress reports which were previously prepared but not submitted, or (b) submit a progress report providing all reportable information described by Paragraph 25 of the Order from the date EPA approved the Work Plan (November 16, 2017) through the present.*

Second, EPA received no draft notice for filing in the land records. *We hereby require that, by close of the fifteenth business day following your receipt of this letter via hand delivery, Turog provide a draft notice for EPA approval as required by Paragraph 31(a) of the Order.*

Third, EPA received no certification regarding the destruction of records. *We hereby require that, by close of the tenth business day following your receipt of this letter via hand delivery, Turog provide a certification as required by Paragraph 40 of the Order.*

Note that Turog may be subject to significant consequences for failing to comply with the Order. Paragraph 46 of the Order provides:

² See Paragraph 2(a) of the EPA-approved Work Plan.

³ See Paragraph 2(b) of the EPA-approved Work Plan.

⁴ See Paragraph 25 of the Order.

⁵ See Paragraph 31(a) of the Order.

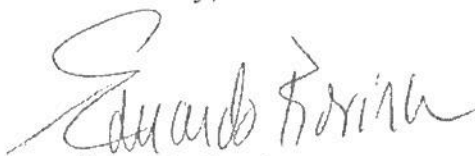
⁶ See Paragraph 40 of the Order.

Any willful violation, or failure or refusal to comply with any provision of this Order may subject [Turog] to civil penalties of up to \$53,907 per violation per day, as provided in Section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1), and the Civil Monetary Penalty Inflation Adjustment Rule, 81 Fed. Reg. 43,091, 40 C.F.R. Part 19.4. In the event of such willful violation, or failure or refusal to comply, EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606. [Turog] may also be subject to punitive damages in an amount up to three times the amount of any costs incurred by the United States as a result of such failure to comply, as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3).

This letter is not a notice of non-compliance or an assessment of penalties under the Order. However, if Turog fails to provide the documents requested in this letter, EPA will consider its enforcement options, including the assessment of penalties and/or judicial enforcement of the Order.

Please do not hesitate to contact me at (215) 814-3436 or Rovira.eduardo@epa.gov if you have any questions regarding this letter. If you prefer, you or your counsel may contact EPA Sr. Assistant Regional Counsel Andrew Goldman at (215) 814-2487 or Goldman.andrew@epa.gov.

Sincerely,



Eduardo Rovira, OSC
EPA Region 3

cc: Andrew Goldman (3RC41)
Michael Towle (3HS31)

Goldman, Andrew

From: Rovira, Eduardo
Sent: Friday, December 07, 2018 4:32 PM
To: Goldman, Andrew
Subject: Chem-Fab Deadlines

Hello Andy,

As of today, I have not received any of the documents listed below . . .

- Progress reports that were due from Turog on November 29, 2018 per EPA's October 16, 2018 letter;
- The record certification that was due from Turog on November 29, 2018 per EPA's October 16, 2018 letter;
and
- The draft deed notice that was due from Turog on December 6, 2018 per EPA's October 16, 2018 letter.

Eduardo Rovira, Jr.
On-Scene Coordinator
Eastern Response Branch
EPA Mid-Atlantic Region



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

APR 25 2018

Heywood Becker, Esq.
Turog Properties Ltd
5382 Wismer Road
Pipersville, PA 18947

Re: **Required Submission of Information**
Chem-Fab Site, Doylestown (Bucks County), Pennsylvania

Dear Mr. Becker:

On March 19, 2018, the EPA issued you, Heywood Becker ("you" and "your") a letter requiring you to provide financial information and/or documents relating to the above-referenced Site within thirty (30) calendar days from your receipt of the letter (see Attachment 1). This letter was issued pursuant to Section 104(e) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9604(e). It was received by you on March 22, 2018. Accordingly, your response was due on or before **April 21, 2018**. To date, however, EPA has not received your response.

NOTICE OF POTENTIAL ENFORCEMENT ACTION

EPA hereby advises you that your failure to respond fully and truthfully to each question, or to justify adequately your failure to respond, may subject you to an enforcement action by EPA, pursuant to Section 104(e)(5)(A) of CERCLA, 42 U.S.C. Section 9604(e)(5)(A). This section authorizes EPA to issue an order directing compliance with an information request made under the statute "after such notice and opportunity for consultation as is reasonably appropriate under the circumstances." This letter constitutes such notice.

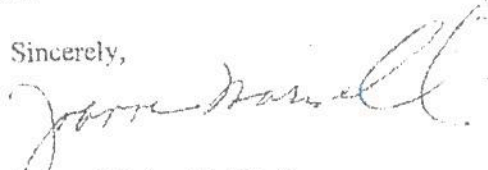
In addition, Section 104(e)(5)(B) of CERCLA, 42 U.S.C. Section 9604(e)(5)(B), allows EPA to seek judicial enforcement of an information request and authorizes the federal district courts to assess a civil penalty not to exceed \$55,907 for each day of non-compliance.

You must fully respond to EPA's March 19, 2018 letter or justify adequately your failure to respond within **seven (7)** calendar days from your receipt of this letter. This seven-day period, however, is not to be construed as an extension of the original deadline, and EPA may take enforcement action based upon your failure to respond to the initial information request letter in a timely and complete manner. All documents and information should be submitted to:

Ms. Joan E. Martin-Banks (3HS62)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029
martin-banks.joan@epa.gov

If you have any questions concerning this matter, please contact Joan E. Martin-Banks, Civil Investigator, at (215) 814-3156. Legal questions should be directed to Andrew S. Goldman, Senior Assistant Regional Counsel, at (215) 814-2487.

Sincerely,



Joanne Marinelli, Chief
Cost Recovery Branch

cc: Andrew S. Goldman, ORC (3RC41)
Eduardo Rovira, OSC (3HS31)
Noreen Wagner, PADEP

Attachment 1: March 19, 2018, Section 104(e) letter to Heywood Becker, Esq.
Attachment 2: Certified Mail Return Receipt

Goldman, Andrew

From: Heywood Becker <yalephd1970@gmail.com>
Sent: Monday, May 21, 2018 9:46 AM
To: Goldman, Andrew; Martin-Banks, Joan
Subject: Turog Documents In Support

The documents in question are more than 25 years old, and are being sought in archived files.
Heywood Becker



Virus-free. www.avast.com

Goldman, Andrew

From: Goldman, Andrew
Sent: Wednesday, June 06, 2018 3:33 PM
To: Heywood Becker; Martin-Banks, Joan
Subject: RE: Turog Documents In Support

Mr. Becker—

Can you give us some idea of the timing of your retrieval of documents from the archives you mention and the production to EPA of documents responsive to our information request?



Andrew S. Goldman (3RC41)

Senior Counsel, Regional Counsel

U.S. Environmental Protection Agency

1200 Arch Street
Philadelphia, PA 19104-2009
Phone: (215) 826-7287
Fax: (215) 826-7201
E-mail: andrew.golman@epa.gov

The information contained in this e-mail and any attachments is confidential, may be privileged for the attorney-client privilege and/or other applicable laws, and is intended solely for the use of the individual(s) named. If you have received this communication in error, please notify me by return e-mail and do not disseminate or act on the information.

From: Heywood Becker [<mailto:yalephd1970@gmail.com>]
Sent: Monday, May 21, 2018 9:46 AM
To: Goldman, Andrew <Goldman.Andrew@epa.gov>; Martin-Banks, Joan <Martin-Banks.Joan@epa.gov>
Subject: Turog Documents In Support

The documents in question are more than 25 years old, and are being sought in archived files.
Heywood Becker



Virus-free. www.avast.com

Goldman, Andrew

From: Goldman, Andrew
Sent: Monday, June 18, 2018 11:43 AM
To: Heywood Becker
Cc: Martin-Banks, Joan
Subject: RE: Chem-Fab: May 15, 2018 Letter

Mr. Becker—

You already have an electronic version of our May 15 letter (it was sent with my June 12 email). We will start using the Carversville PO box rather than the Pipersville one.

We have not heard from you following my June 6 email asking how much time it will take you to retrieve responsive documents from archives and respond to our March 19 information request. Please advise.



Andrew S. Goldman (3RC41)
Sr. Assistant Regional Counsel

U.S. Environmental Protection Agency
1215 North 17th St.
P.O. Box 1215
Carversville, TN 37031-1215
Tel.: 615/474-3400
andrew.goldman@epa.gov

The information contained in this communication is confidential and is protected by the information privacy act and other applicable laws. Product disclosure and trademarked names for the use of the addressee(s). If you have received this communication in error, please notify me by return email and delete this communication and all copies thereof.

From: Heywood Becker [mailto:yalephd1970@gmail.com]
Sent: Tuesday, June 12, 2018 9:08 AM
To: Goldman, Andrew <Goldman.Andrew@epa.gov>
Subject: Re: Chem-Fab: May 15, 2018 Letter

I was away. Please email it or mail to POB 180, Carversville 18913 which I routinely visit. The Pipersville Office is much further away and in a direction I rarely drive.

Sent from my iPhone

On Jun 12, 2018, at 9:05 AM, Goldman, Andrew <Goldman.Andrew@epa.gov> wrote:

Mr. Becker—

Goldman, Andrew

From: Heywood Becker <yalephd1970@gmail.com>
Sent: Monday, June 18, 2018 3:44 PM
To: Goldman, Andrew
Subject: Re: Chem-Fab: May 15, 2018 Letter
Attachments: ATT00001.txt

Thank you for the information and your future use of my PO box.

As to your question, I could not accurately state a date. I am gathering the records from those many years ago, and will advise.



Virus-free. www.avast.com

On Mon, Jun 18, 2018 at 11:43 AM, Goldman, Andrew <Goldman.Andrew@epa.gov> wrote:

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Goldman, Andrew

From: Goldman, Andrew
Sent: Friday, July 13, 2018 12:46 PM
To: Heywood Becker
Cc: Martin-Banks, Joan; nishitani, brian
Subject: RE: Chem-Fab: May 15, 2018 Letter

Mr. Becker—It has been almost a month since you last advised that you would be working to gather documents responsive to EPA's most recent information request. Can you please update me on your progress?



Andrew S. Goldman (3RC41)
Sr. Assistant Regional Counsel

U.S. Environmental Protection Agency
1921 North Street
Washington, DC 20460-0001
Phone: (202) 554-6000
Fax: (202) 554-6001
andrew.goldman@epa.gov

This e-mail and any files transmitted with it are confidential and intended only for the individual(s) named. If you have received this communication in error, please notify the system manager. This e-mail and any files transmitted with it are confidential and intended only for the individual(s) named. If you have received this communication in error, please notify the system manager.

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Goldman, Andrew

From: Heywood Becker <yalephd1970@gmail.com>
Sent: Saturday, July 14, 2018 11:32 AM
To: Goldman, Andrew
Subject: Re: Chem-Fab: May 15, 2018 Letter

Lawyer who has filed away. I am visiting daughter in Sweden leaving Monday. Back end of month. Will gather materials then.

Sent from my iPhone

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<image001.jpg>

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<image002.jpg> Virus-free. www.avast.com

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Goldman, Andrew

From: Goldman, Andrew
Sent: Tuesday, August 07, 2018 1:31 PM
To: Heywood Becker
Cc: Martin-Banks, Joan
Subject: RE: Chem-Fab: May 15, 2018 Letter

Mr. Becker—Please advise regarding status of your efforts to provide EPA with the requested documents. Thanks you.



Andrew S. Goldman (3RC41)
En Assistant Regional Counsel

U.S. Environmental Protection Agency
1200 Ave. R
Washington, DC 20460
Phone: 202-564-3456
Fax: 202-564-7600
goldman.andy@epa.gov

This information contained in this e-mail and any attachments may be privileged, confidential, or otherwise exempt from public release under the Freedom of Information Act. If you have received this e-mail in error, please notify me by return e-mail and destroy this communication and all copies thereof.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

September 4, 2018

**VIA FIRST CLASS MAIL
& EMAIL**

Heywood Becker
Box 180
Carversville, PA 18913

VIA UPS MAIL

Heywood Becker
5382 Wismer Road
Pipersville, PA 18947

**Re: Chem-Fab Superfund Site: Overdue Response
to April 25, 2018 Information Request**

Dear Mr. Becker:

By this letter we again seek an update on the status of your response to EPA's information request letter dated March 19, 2018. By letter dated April 25, 2018, we notified you that your response was overdue (a copy of these letters is attached). You subsequently advised that:

- the responsive documents are more than 25 years old and would be sought from archives (your email dated May 21, 2018);
- you were unable to estimate the timing of your reply but were gathering responsive documents (your email of June 18, 2018); and

- you would gather responsive documents by the end of July (your email of July 14, 2018).

I sent you an additional request for an update via email on August 7, 2018 and received no response. It is now the end of August 2018 and we have not heard from you.

Recall that our original information request (April 25, 2018) explained that EPA may, among other things, seek penalties for failure to timely comply with the request. It is becoming increasingly difficult to justify further delay to our enforcement of the request, especially given your vague representations regarding compliance and your failure to reply to our inquiry for an update.

Please contact me at your earliest convenience to discuss the status of your compliance with EPA's request for information and your best estimate for submission of the required documentation.

Respectfully,



ANDREW S. GOLDMAN
Sr. Assistant Regional Counsel

cc: Joan Martin-Banks (3HS62)
Joanne Marinelli (3HS62)

Attachment



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

APR 25 2018

Heywood Becker, Esq.
Turog Properties Ltd
5382 Wismer Road
Pipersville, PA 18947

**Re: Required Submission of Information
Chem-Fab Site, Doylestown (Bucks County), Pennsylvania**

Dear Mr. Becker:

On March 19, 2018, the EPA issued you, Heywood Becker ("you" and "your") a letter requiring you to provide financial information and/or documents relating to the above-referenced Site within thirty (30) calendar days from your receipt of the letter (see Attachment 1). This letter was issued pursuant to Section 104(e) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9604(e). It was received by you on March 22, 2018. Accordingly, your response was due on or before **April 21, 2018**. To date, however, EPA has not received your response.

NOTICE OF POTENTIAL ENFORCEMENT ACTION

EPA hereby advises you that your failure to respond fully and truthfully to each question, or to justify adequately your failure to respond, may subject you to an enforcement action by EPA, pursuant to Section 104(e)(5)(A) of CERCLA, 42 U.S.C. Section 9604(e)(5)(A). This section authorizes EPA to issue an order directing compliance with an information request made under the statute "after such notice and opportunity for consultation as is reasonably appropriate under the circumstances." This letter constitutes such notice.

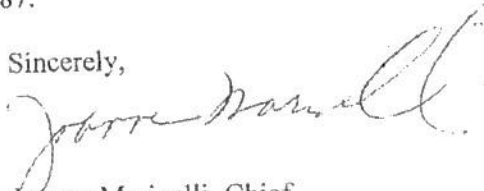
In addition, Section 104(e)(5)(B) of CERCLA, 42 U.S.C. Section 9604(e)(5)(B), allows EPA to seek judicial enforcement of an information request and authorizes the federal district courts to assess a civil penalty not to exceed \$55,907 for each day of non-compliance.

You must fully respond to EPA's March 19, 2018 letter or justify adequately your failure to respond within **seven (7)** calendar days from your receipt of this letter. This seven-day period, however, is not to be construed as an extension of the original deadline, and EPA may take enforcement action based upon your failure to respond to the initial information request letter in a timely and complete manner. All documents and information should be submitted to:

Ms. Joan E. Martin-Banks (3HS62)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029
martin-banks.joan@epa.gov

If you have any questions concerning this matter, please contact Joan E. Martin-Banks, Civil Investigator, at (215) 814-3156. Legal questions should be directed to Andrew S. Goldman, Senior Assistant Regional Counsel, at (215) 814-2487.

Sincerely,

A handwritten signature in cursive script, appearing to read "Joanne Marinelli".

Joanne Marinelli, Chief
Cost Recovery Branch

cc: Andrew S. Goldman, ORC (3RC41)
Eduardo Rovira, OSC (3HS31)
Noreen Wagner, PADEP

Attachment 1: March 19, 2018, Section 104(e) letter to Heywood Becker, Esq.
Attachment 2: Certified Mail Return Receipt



ATTACHMENT 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

MAR 19 2010

E-Mail
Certified Mail

Heywood Becker, Esq.
Turog Properties Ltd.
5382 Wismer Road
Pipersville, PA 18947

**Re: Required Submission of Information
Chem-Fab Site, Doylestown (Bucks County), Pennsylvania**

Dear Mr. Becker:

The U.S. Environmental Protection Agency ("EPA") is seeking information concerning a release, or threat of release, of hazardous substances, pollutants or contaminants into the environment at the Chem-Fab Site ("Site"), located at 300 N. Broad Street, Doylestown, Bucks County, Pennsylvania as well as information relating to the ability to pay for a cleanup at the above-referenced Site. The purpose of this letter is to obtain certain financial information from yourself in connection with the Site. The specific information required is attached to this letter as Enclosure E.

Pursuant to the authority of Section 104(e) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. Section 9604(e), EPA has the authority to require you, Heywood Becker ("you" and "your") to furnish all information and documents in your possession, custody or control, or in the possession, custody or control of any of your employees or agents, which concern, refer, or relate to hazardous substances as defined by Section 101(14) of CERCLA, 42 U.S.C. Section 9601(14), pollutants and/or contaminants as defined by Section 101(33), 42 U.S.C. Section 9601(33), and which also concern Turog Properties Ltd.'s ability to pay EPA's costs in cleaning up the Site.

Section 104 of CERCLA authorizes EPA to pursue penalties for failure to comply with that section or for failure to respond adequately to required submissions of information. In addition, providing false, fictitious, or fraudulent statements or representations may subject you to criminal penalties under 18 U.S.C. § 1001. The information you provide may be used by EPA in administrative, civil, or criminal proceedings.

As you may be aware, on January 11, 2002, former President Bush signed into law the Superfund Small Business Liability Relief and Brownfields Revitalization Act. This Act contains several exemptions and defenses to CERCLA liability, which we suggest that all parties evaluate. You may obtain a copy of the law via the Internet at <http://www.epa.gov/swerosps/bf/sblrbra.htm> and review EPA guidance regarding these exemptions at <http://www.epa.gov/compliance/resources/policies/cleanup/superfund>. EPA has created a number of helpful resources for small businesses. EPA has established the

National Compliance Assistance Clearinghouse as well as Compliance Assistance Centers which offer various forms of resources to small businesses. You may inquire about these resources at www.epa.gov. In addition, the EPA Small Business Ombudsman may be contacted at www.epa.gov/sbo. Finally, EPA developed a fact sheet about the Small Business Regulatory Enforcement Fairness Act (SBREFA), which is enclosed with this letter.

You must respond in writing to this required submission of information within **thirty (30) calendar days** of your receipt of this letter. The response must be signed by an appropriately authorized corporate official.

If, for any reason, you do not provide all information responsive to this letter, then in your answer to EPA you must: (1) describe specifically what was not provided, (2) provide to EPA an appropriate reason why the information was not provided, (3) provide your document retention policy during your period of ownership of the Site, (4) provide a description of any relevant records destroyed and the date(s) of destruction, (5) provide a description of the information that would have been contained in the documents that were destroyed, and (6) state the name(s) of the individual(s) responsible for the destruction of the documents.

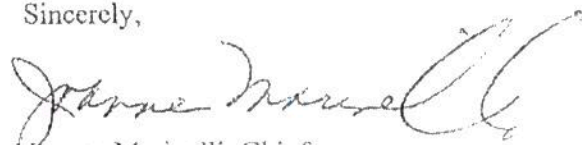
All documents and information should be sent to:

Joan Martin-Banks, Civil Investigator (3HS62)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

This required submission of information is not subject to the approval requirements of the Paperwork Reduction Act of 1980, 44 U.S.C. Section 3501, *et seq.*

If you have any questions concerning this matter, please contact Joan Martin-Banks at 215-814-3156, or Senior Assistant Regional Counsel Andrew S. Goldman at (215) 814-2487.

Sincerely,



Joanne Marinelli, Chief
Cost Recovery Branch
Hazardous Site Cleanup Division

- Enclosures: A. Business Confidentiality Claims/Disclosure of Your Response to EPA Contractors and Grantees
B. List of Contractors that May Review Your Response
C. Definitions
D. Instructions
E. Information Requested

cc: Andrew S. Goldman, Esq. (3RC41)
Noreen Wagner, PADEP

Enclosure A

Business Confidentiality Claims

You are entitled to assert a claim of business confidentiality covering any part or all of the submitted information, in the manner described in 40 C.F.R. Part 2, Subpart B. Information subject to a claim of business confidentiality will be made available to the public only in accordance with the procedures set forth in 40 C.F.R. Part 2, Subpart B. If a claim of business confidentiality is not asserted when the information is submitted to EPA, EPA may make this information available to the public without further notice to you. You must clearly mark such claimed information by either stamping or using any other such form of notice that such information is a trade secret, proprietary, or company confidential. To best ensure that your intent is clear, we recommend that you mark as confidential each page containing such claimed information.

Disclosure of Your Response to EPA Contractors and Grantees

EPA may contract with one or more independent contracting firms (See, Enclosure B) to review the documentation, including documents which you claim are confidential business information ("CBI"), which you submit in response to this information request, depending on available agency resources. Additionally, EPA may provide access to this information to (an) individual(s) working under (a) cooperative agreement(s) under the Senior Environmental Employee Program ("SEE Enrollees"). The SEE Program was authorized by the Environmental Programs Assistance Act of 1984 (Pub. L. 98-313). The contractor(s) and/or SEE Enrollee(s) will be filing, organizing, analyzing and/or summarizing the information for EPA personnel. The contractors have signed a contract with EPA that contains a confidentiality clause with respect to CBI that they handle for EPA. The SEE Enrollee(s) is working under a cooperative agreement that contains a provision concerning the treatment and safeguarding of CBI. The individual SEE Enrollee has also signed a confidentiality agreement regarding treatment of CBI. Pursuant to Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and EPA's regulations at 40 C.F.R. § 2.310(h), EPA may share such CBI with EPA's authorized representatives which include contractors and cooperators under the Environmental Programs Assistance Act of 1984. (See 58 Fed.Reg. 7187 (1993)). If you have any objection to disclosure by EPA of documents which you claim are CBI to any or all of the entities listed in Enclosure B, you must notify EPA in writing at the time you submit such documents.

Enclosure B

[rev. 2/2017]

List of Contractors That May Review Your Response

Emergint Technologies, Inc.

Contract # EP-W-11-025

Subcontractor: Booz-Allen & Hamilton

Arctic Slope Management Services

Contract # EP-W-17-011

Subcontractor: Booz-Allen & Hamilton

CDM-Federal Programs Corporation

Contract # EP-S3-07-06

Subcontractors: CDI-Infrastructure, LLC d/b/a I.R.
Kimball
Avatar Environmental LLC
Terradon Corporation

Cherokee Nation Assurance, LLC

Contract #EP-S3-14-01

EA Engineering, Science and Technology, Inc.

Contract #EP-S3-07-07

Subcontractor: URS

Eisenstein Malachuk, LLP

Contract #EP-W-13-006

Subcontractors: R. M. Fields International, LLC

Hydrogeologic (HGL)

Contract #EP-S3-07-05

Subcontractor: CH2MHill
Sullivan International

Weston Solutions

Contract #EP-S3-1502

Tech Law, Inc. (Removal Program)

Contract #EP-S3-1503

Tetra Tech NUS, Inc.

Contract #EP-S3-07-04

Kenron Environmental Services, Inc.

Contract #EP-S3-12-01,

Subcontractor: AECOM Technical Services, Inc.

Guardian Environmental Services Company, Inc.

Contract #EP-S3-12-02,

Subcontractors: Aerotek, Inc.,
Tetra Tech, Inc.

Environmental Restoration, LLC

Contract # EP-S3-12-03

Subcontractors: Aerotek, Inc.
Haas Environmental, Inc.
Hertz

Northstar Federal Services, Inc.

Contract # EP-S3-12-05

ICF International

Contract # EP-BPA-12-W-0003

Cooperative Agreements

National Association of Hispanic Elderly

CA# CO-835398

National Older Workers Career Center

CA# Q-835621

Enclosure C

Definitions

1. The term "arrangement" shall mean every separate contract or other agreement or understanding between two or more persons, whether written or oral.
2. The term "documents" shall mean writings, photographs, sound or magnetic records, drawings, or other similar things by which information has been preserved and also includes information preserved in a form which must be translated or deciphered by machine in order to be intelligible to humans. Examples of documents include, but are not limited to, electronic mail and other forms of computer communication, drafts, correspondence, memoranda, notes, diaries, statistics, letters, telegrams, minutes, contracts, reports, studies, checks, statements, receipts, summaries, pamphlets, books, invoices, checks, bills of lading, weight receipts, toll receipts, offers, contracts, agreements, deeds, leases, manifests, licenses, permits, bids, proposals, policies of insurance, logs, inter-office and intra-office communications, notations of any conversations (including, without limitation, telephone calls, meetings, and other communications such as e-mail), bulletins, printed matter, computer printouts, invoices, worksheets, graphic or oral records or representations of any kind (including, without limitation, charts, graphs, microfiche, microfilm, videotapes, recordings and motion pictures), electronic, mechanical, magnetic or electric records or representations of any kind (including, without limitation, tapes, cassettes, discs, recordings and computer memories), minutes of meetings, memoranda, notes, calendar or daily entries, agendas, notices, announcements, maps, manuals, brochures, reports of scientific study or investigation, schedules, price lists, data, sample analyses, and laboratory reports.
3. The term "hazardous substance" means (a) any substance designated pursuant to section 1321(b)(2)(A) of Title 33 of the U.S. Code, (b) any element, compound, mixture, solution, or substance designated pursuant to Section 9602 of CERCLA, (c) any hazardous waste having the characteristics identified under or listed pursuant to Section 3001 of the Solid Waste Disposal Act (42 U.S.C. § 6921) (but not including any waste the regulation of which under the Solid Waste Disposal Act, 42 U.S.C. § 6901 et seq., has been suspended by Act of Congress), (d) any toxic pollutant listed under Section 1317(a) of Title 33, (e) any hazardous air pollutant listed under section 112 of the Clean Air Act, 42 U.S.C. § 7412, and (f) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to Section 2606 of Title 15 of the U.S. Code. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (a) through (f) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).
4. The term "pollutant or contaminant" shall include, but not be limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release

into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such organisms or their offspring, except that the term "pollutant or contaminant" shall not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under CERCLA, and shall not include natural gas, liquefied natural gas, or synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas).

5. The term "release" means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant), but excludes (a) any release which results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons, (b) emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine, (c) release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in the Atomic Energy Act of 1954, 42 U.S.C. § 2011 et seq., if such release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under Section 170 of such Act, 42 U.S.C. § 2210, or, for the purposes of Section 9604 of CERCLA or any other response action, any release of source, byproduct, or special nuclear material from any processing site designated under 42 U.S.C. §§ 7912(a)(1) and 7942(a) and (d) the normal application of fertilizer.
6. The term "waste" or "wastes" shall mean and include any discarded materials including, but not limited to, trash, garbage, refuse, by-products, solid waste, hazardous waste, hazardous substances, pollutants or contaminants, and discarded or spilled chemicals, whether solid, liquid, or sludge.
7. The term "you" when referring to an incorporated entity shall mean and include the incorporated entity and its agents and representatives, including, but not limited to, persons directly authorized to transact business on the entity's behalf such as officers, directors, or partners with which the entity is affiliated, employees, accountants, engineers, or other persons who conduct business on the entity's behalf, as well as affiliated entities, including, but not limited to, partnerships, limited liability companies, divisions, subsidiaries, and holding companies.

Enclosure D

Instructions

1. You are entitled to assert a claim of business confidentiality covering any part or all of the information you submit. If you desire to assert a claim of business confidentiality, please see Enclosure A, *Business Confidentiality Claims/Disclosure of Your Response to EPA Contractors and Grantees*. You must clearly mark such information by either stamping or using any other form of notice that such information is a trade secret, proprietary, or company confidential. To ensure to the greatest extent that your intent is clear, we recommend that you mark as confidential each page containing such claimed information.
2. Please provide a separate, detailed narrative response to each question, and to each subpart of each question, set forth in this Information Request. If you fail to provide a detailed response, EPA may deem your response to be insufficient and thus a failure to comply with this Information Request, which may subject you to penalties.
3. Precede each response with the number of the question or subpart of the question to which it corresponds. For each document or group of documents produced in response to this Information Request, indicate the number of the specific question or subpart of the question to which the document(s) responds.
4. Should you find at any time after submission of your response that any portion of the submitted information is false, misrepresents the truth or is incomplete, you must notify EPA of this fact and provide EPA with a corrected written response.
5. Any terms that are used in this Information Request and/or its Enclosures that are defined in CERCLA shall have the meaning set forth in CERCLA. Definitions of several such terms are set forth in Enclosure C, *Definitions*, for your convenience. Also, several additional terms not defined in CERCLA are defined in Enclosure C. Those terms shall have the meaning set forth in Enclosure C any time such terms are used in this Information Request and/or its Enclosures.

Enclosure E

Information Required

1. Did you (Heywood Becker) loan funds to any business entity in order to acquire, rehabilitate, and/or maintain the land and building(s) at 991 Bushkill Drive in Easton, Pennsylvania (hereinafter the "Bushkill Property")? For each loan:
 - a. State the date of the loan, the amount of the loan, and the borrower;
 - b. Provide documentation of the loan (e.g., a note or mortgage); and
 - c. Identify the date and amount of each payment made to reimburse you (Heywood Becker) for amounts so loaned.

2. You previously stated that you (Heywood Becker) acquired the Bushkill Property for "an eventual purchase price of about \$215,000," that you acquired the Bushkill Property "from a federal bankruptcy court in Texas," and that the payment for the Bushkill Property took the form of "100% of the corporate stock in Rinek Rope Co., Inc."
 - a. Please provide details regarding the acquisition of the Bushkill Property "from a federal bankruptcy court in Texas." Your answer should include, among other things:
 1. The date of such acquisition;
 2. The identity of the bankrupt party;
 3. The identity of the bankruptcy court and the docket number;
 4. The name of the party that acquired the Bushkill Property from the bankrupt party;
 5. The amount of consideration paid to acquire the Bushkill Property from the bankrupt party;
 6. The identity of the party to whom title was transferred;
 7. The relationship, if any, between you (Heywood Becker) and (a) the bankrupt party, and (b) the party that acquired the Bushkill Property from the bankrupt party.

 - b. Please provide details regarding the acquisition of the Bushkill Property by Rinek Rope Co., Inc. (Rinek). Your answer should include:
 1. The date of such acquisition;
 2. The identity of the party from whom Rinek acquired the Bushkill Property;
 3. The amount of consideration paid by Rinek to such party;
 4. The relationship, if any, between you (Heywood Becker) and (a) the party from whom Rinek acquired the Bushkill Property, and (b) Rinek.

 - c. Please provide details regarding the acquisition of the Bushkill Property by Turog Properties Ltd. Your answer should include:
 1. The date of such acquisition;
 2. The amount of consideration paid to acquire the Bushkill Property from Rinek.

3. You previously indicated that Turog was to have taken title to the Bushkill Property and that “the underlying theory was that title to [the Bushkill Property] was to be held by Turog for the beneficial ownership of Heywood Becker.” Please explain the basis for this theory and provide all documents (e.g., trust agreements) supporting this contention.
4. Between 1989 and 2017, were you (Heywood Becker) paid rent by or on behalf of tenants occupying space at the Bushkill Property? For each payment so received, identify:
 - a. The date of the payment;
 - b. The amount of the payment; and
 - c. The entity making such payment.
5. You previously indicated that you (Heywood Becker) expended \$930,000 for “rehabilitation costs” associated with the Bushkill Property and supported that figure with the following formula: $\$15/\text{square foot} \times 63,000 \text{ square feet}$. the buildings on the Bushkill property “comprised approximately 62,000 sf.”
 - a. Please explain the 1,000-square foot discrepancy between your initial representation of the square footage of the building(s) and the representation made in connection with the computation of rehabilitation costs.
 - b. The formula you offer in support of this amount reads like a contractor’s bid for the project. Please state whether the formula accurately accounts for the funds expended by you (Heywood Becker) for rehabilitation of the Bushkill Property.
 - c. Provide documentation supporting payment by you (Heywood Becker) of the costs of rehabilitating the Bushkill Property.
6. You previously indicated that you (Heywood Becker) were owed “management and leasing fees” associated with the Bushkill Property in the amount of \$91,000 and provided the following formula in support of this figure: $7\% \times \$50,000/\text{year} \times 26 \text{ years}$. Please explain why the “\$50,000” and “26 years” figures were used in this formula.
7. You previously indicated that you (Heywood Becker) were owed the sum of \$1,114,000 at the closing of the sale of the Bushkill Property to Lafayette College.
 - a. Please identify the price paid by or on behalf of Lafayette College for the Bushkill Property.
 - b. Please identify whether any funds paid by or on behalf of Lafayette College for the Bushkill Property were paid to Turog and the amount of such payments.
 - c. Please identify the actual amount paid at closing to you (Heywood Becker) in connection with the transfer of the Bushkill Property to Lafayette College.

8. Northampton County, Pennsylvania land records indicate that Turog owned the Bushkill Property from December 20, 2005 through January 23, 2017. Please confirm that the company owned the Bushkill Property during this period or, if this information is not accurate, provide correct dates.

Attachment 2

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1 Article Addressed to:

Heywood Becker, Esq.
 Turog Properties, Ltd.
 5382 Wismer Road
 Pipersville, PA 18947



2 Article Number (Transfer from service label)

7016 1370 0001 3643 1511

PS Form 3811, July 2015 PSN 7530-02-900-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature Agent Addressee

X

B. Received by (Printed Name) Date of Delivery

W. Beckner 3/2/15

C. Date of Delivery

D. Is delivery address different from item 1? Yes No

If YES, enter delivery address below:

3. Service Types

- Adult Signature Restricted Delivery
- Adult Signature Restricted Delivery
- Certified Mail
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- First Mail
- First Mail Restricted Delivery
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted
- Return Receipt for Merchandise
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

Domestic Return Receipt



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

October 25, 2018

VIA HAND DELIVERY

Heywood Becker
Box 180
Carversville, PA 18913

**Re: Chem-Fab Superfund Site: Overdue Response
to April 25, 2018 Information Request**

Dear Mr. Becker:

This transmits, via hand delivery, my letter of September 4, 2018 regarding your failure to comply with EPA's overdue information request. Please review the attached contents and contact me at your earliest convenience.

Respectfully,

A handwritten signature in black ink, appearing to be "ASG", written over a horizontal line.

ANDREW S. GOLDMAN
Sr. Assistant Regional Counsel

Attachments: September 4, 2018 EPA Letter
 April 25, 2018 EPA Letter
 March 19, 2018 EPA Letter

cc: Joan Martin-Banks (3HS62)
 Joanne Marinelli (3HS62)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

September 4, 2018

**VIA FIRST CLASS MAIL
& EMAIL**

Heywood Becker
Box 180
Carversville, PA 18913

VIA UPS MAIL

Heywood Becker
5382 Wismer Road
Pipersville, PA 18947

**Re: Chem-Fab Superfund Site: Overdue Response
to April 25, 2018 Information Request**

Dear Mr. Becker:

By this letter we again seek an update on the status of your response to EPA's information request letter dated March 19, 2018. By letter dated April 25, 2018, we notified you that your response was overdue (a copy of these letters is attached). You subsequently advised that:

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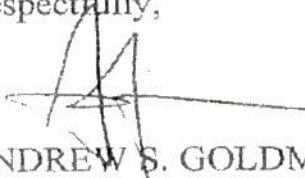
- you would gather responsive documents by the end of July (your email of July 14, 2018).

I sent you an additional request for an update via email on August 7, 2018 and received no response. It is now the end of August 2018 and we have not heard from you.

Recall that our original information request (April 25, 2018) explained that EPA may, among other things, seek penalties for failure to timely comply with the request. It is becoming increasingly difficult to justify further delay to our enforcement of the request, especially given your vague representations regarding compliance and your failure to reply to our inquiry for an update.

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ANDREW S. GOLDMAN
Sr. Assistant Regional Counsel

cc: Joan Martin-Banks (3HS62)
Joanne Marinelli (3HS62)

Attachment



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
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APR 25 2018

Heywood Becker, Esq.
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EPA hereby advises you that your failure to respond fully and truthfully to each question, or to justify adequately your failure to respond, may subject you to an enforcement action by EPA, pursuant to Section 104(e)(5)(A) of CERCLA, 42 U.S.C. Section 9604(e)(5)(A). This section authorizes EPA to issue an order directing compliance with an information request made under the statute "after such notice and opportunity for consultation as is reasonably appropriate under the circumstances." This letter constitutes such notice.

In addition, Section 104(e)(5)(B) of CERCLA, 42 U.S.C. Section 9604(e)(5)(B), allows EPA to seek judicial enforcement of an information request and authorizes the federal district courts to assess a civil penalty not to exceed \$55,907 for each day of non-compliance.

You must fully respond to EPA's March 19, 2018 letter or justify adequately your failure to respond within **seven (7)** calendar days from your receipt of this letter. This seven-day period, however, is not to be construed as an extension of the original deadline, and EPA may take enforcement action based upon your failure to respond to the initial information request letter in a timely and complete manner. All documents and information should be submitted to:

Ms. Joan E. Martin-Banks (3HS62)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029
martin-banks.joan@epa.gov

If you have any questions concerning this matter, please contact Joan E. Martin-Banks, Civil Investigator, at (215) 814-3156. Legal questions should be directed to Andrew S. Goldman, Senior Assistant Regional Counsel, at (215) 814-2487.

Sincerely,



Joanne Marinelli, Chief
Cost Recovery Branch

cc: Andrew S. Goldman, ORC (3RC41)
Eduardo Rovira, OSC (3HS31)
Noreen Wagner, PADEP

Attachment 1: March 19, 2018, Section 104(e) letter to Heywood Becker, Esq.
Attachment 2: Certified Mail Return Receipt



ATTACHMENT 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

MAR 19 2012

E-Mail
Certified Mail

Heywood Becker, Esq.
Turog Properties Ltd.
5382 Wismer Road
Pipersville, PA 18947

**Re: Required Submission of Information
Chem-Fab Site, Doylestown (Bucks County), Pennsylvania**

Dear Mr. Becker:

The U.S. Environmental Protection Agency ("EPA") is seeking information concerning a release, or threat of release, of hazardous substances, pollutants or contaminants into the environment at the Chem-Fab Site ("Site"), located at 300 N. Broad Street, Doylestown, Bucks County, Pennsylvania as well as information relating to the ability to pay for a cleanup at the above-referenced Site. The purpose of this letter is to obtain certain financial information from yourself in connection with the Site. The specific information required is attached to this letter as Enclosure E.

Pursuant to the authority of Section 104(e) of the Comprehensive Environmental Response; Compensation and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. Section 9604(e), EPA has the authority to require you, Heywood Becker ("you" and "your") to furnish all information and documents in your possession, custody or control, or in the possession, custody or control of any of your employees or agents, which concern, refer, or relate to hazardous substances as defined by Section 101(14) of CERCLA, 42 U.S.C. Section 9601(14), pollutants and/or contaminants as defined by Section 101(33), 42 U.S.C. Section 9601(33), and which also concern Turog Properties Ltd.'s ability to pay EPA's costs in cleaning up the Site.

Section 104 of CERCLA authorizes EPA to pursue penalties for failure to comply with that section or for failure to respond adequately to required submissions of information. In addition, providing false, fictitious, or fraudulent statements or representations may subject you to criminal penalties under 18 U.S.C. § 1001. The information you provide may be used by EPA in administrative, civil, or criminal proceedings.

As you may be aware, on January 11, 2002, former President Bush signed into law the Superfund Small Business Liability Relief and Brownfields Revitalization Act. This Act contains several exemptions and defenses to CERCLA liability, which we suggest that all parties evaluate. You may obtain a copy of the law via the Internet at <http://www.epa.gov/swerosps/bf/sblrbra.htm> and review EPA guidance regarding these exemptions at <http://www.epa.gov/compliance/resources/policies/cleanup/superfund/>. EPA has created a number of helpful resources for small businesses. EPA has established the

National Compliance Assistance Clearinghouse as well as Compliance Assistance Centers which offer various forms of resources to small businesses. You may inquire about these resources at www.epa.gov. In addition, the EPA Small Business Ombudsman may be contacted at www.epa.gov/sbo. Finally, EPA developed a fact sheet about the Small Business Regulatory Enforcement Fairness Act (SBREFA), which is enclosed with this letter.

You must respond in writing to this required submission of information within **thirty (30) calendar days** of your receipt of this letter. The response must be signed by an appropriately authorized corporate official.

If, for any reason, you do not provide all information responsive to this letter, then in your answer to EPA you must: (1) describe specifically what was not provided, (2) provide to EPA an appropriate reason why the information was not provided, (3) provide your document retention policy during your period of ownership of the Site, (4) provide a description of any relevant records destroyed and the date(s) of destruction, (5) provide a description of the information that would have been contained in the documents that were destroyed, and (6) state the name(s) of the individual(s) responsible for the destruction of the documents.

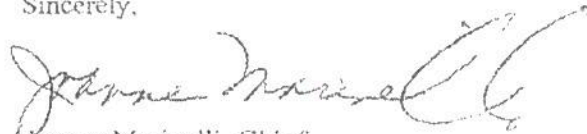
All documents and information should be sent to:

Joan Martin-Banks, Civil Investigator (3HS62)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

This required submission of information is not subject to the approval requirements of the Paperwork Reduction Act of 1980, 44 U.S.C. Section 3501, *et seq.*

If you have any questions concerning this matter, please contact Joan Martin-Banks at 215-814-3156, or Senior Assistant Regional Counsel Andrew S. Goldman at (215) 814-2487.

Sincerely,



Joanne Marinelli, Chief
Cost Recovery Branch
Hazardous Site Cleanup Division

- Enclosures: A. Business Confidentiality Claims/Disclosure of Your Response to EPA Contractors and Grantees
B. List of Contractors that May Review Your Response
C. Definitions
D. Instructions
E. Information Requested

cc: Andrew S. Goldman, Esq. (3RC41)
Noreen Wagner, PADEP

Enclosure A

Business Confidentiality Claims

You are entitled to assert a claim of business confidentiality covering any part or all of the submitted information, in the manner described in 40 C.F.R. Part 2, Subpart B. Information subject to a claim of business confidentiality will be made available to the public only in accordance with the procedures set forth in 40 C.F.R. Part 2, Subpart B. If a claim of business confidentiality is not asserted when the information is submitted to EPA, EPA may make this information available to the public without further notice to you. You must clearly mark such claimed information by either stamping or using any other such form of notice that such information is a trade secret, proprietary, or company confidential. To best ensure that your intent is clear, we recommend that you mark as confidential each page containing such claimed information.

Disclosure of Your Response to EPA Contractors and Grantees

EPA may contract with one or more independent contracting firms (See, Enclosure B) to review the documentation, including documents which you claim are confidential business information ("CBI"), which you submit in response to this information request, depending on available agency resources. Additionally, EPA may provide access to this information to (an) individual(s) working under (a) cooperative agreement(s) under the Senior Environmental Employee Program ("SEE Enrollees"). The SEE Program was authorized by the Environmental Programs Assistance Act of 1984 (Pub. L. 98-313). The contractor(s) and/or SEE Enrollee(s) will be filing, organizing, analyzing and/or summarizing the information for EPA personnel. The contractors have signed a contract with EPA that contains a confidentiality clause with respect to CBI that they handle for EPA. The SEE Enrollee(s) is working under a cooperative agreement that contains a provision concerning the treatment and safeguarding of CBI. The individual SEE Enrollee has also signed a confidentiality agreement regarding treatment of CBI. Pursuant to Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and EPA's regulations at 40 C.F.R. § 2.310(h), EPA may share such CBI with EPA's authorized representatives which include contractors and cooperators under the Environmental Programs Assistance Act of 1984. (See 58 Fed. Reg. 7187 (1993)). If you have any objection to disclosure by EPA of documents which you claim are CBI to any or all of the entities listed in Enclosure B, you must notify EPA in writing at the time you submit such documents.

Enclosure B

[rev. 2/2017]

List of Contractors That May Review Your Response

Emergent Technologies, Inc.

Contract # EP-W-11-025

Subcontractor: Booz-Allen & Hamilton

Arctic Slope Management Services

Contract # EP-W-17-011

Subcontractor: Booz-Allen & Hamilton

CDM-Federal Programs Corporation

Contract # EP-S3-07-06

Subcontractors: CDI-Infrastructure, LLC d/b/a L.R.
Kimball
Avatar Environmental LLC
Terradon Corporation

Cherokee Nation Assurance, LLC

Contract #EP-S3-14-01

EA Engineering, Science and Technology, Inc.

Contract #EP-S3-07-07

Subcontractor: URS

Eisenstein Malanckuck, LLP

Contract #EP-W-13-006

Subcontractors: R. M. Fields International, LLC

Hydrogeologic (HGL)

Contract #EP-S3-07-05

Subcontractor: CH2MHill
Sullivan International

Weston Solutions

Contract #EP-S3-1502

Tech Law, Inc. (Removal Program)

Contract #EP-S3-1503

Tetra Tech NUS, Inc.

Contract #EP-S3-07-04

Kemron Environmental Services, Inc.

Contract #EP-S3-12-01.

Subcontractor: AECOM Technical Services, Inc.

Guardian Environmental Services Company, Inc.

Contract #EP-S3-12-02.

Subcontractors: Aerotek, Inc.,
Tetra Tech, Inc.

Environmental Restoration, LLC

Contract # EP-S3-12-03

Subcontractors: Aerotek, Inc.
Haus Environmental, Inc.
Hertz

Northstar Federal Services, Inc.

Contract # EP-S3-12-05

ICF International

Contract # EP-BPA-12-W-0003

Cooperative Agreements

National Association of Hispanic Elderly
CA# CO-835398

National Older Workers Career Center
CA# Q-835621

Enclosure C

Definitions

1. The term "arrangement" shall mean every separate contract or other agreement or understanding between two or more persons, whether written or oral.
2. The term "documents" shall mean writings, photographs, sound or magnetic records, drawings, or other similar things by which information has been preserved and also includes information preserved in a form which must be translated or deciphered by machine in order to be intelligible to humans. Examples of documents include, but are not limited to, electronic mail and other forms of computer communication, drafts, correspondence, memoranda, notes, diaries, statistics, letters, telegrams, minutes, contracts, reports, studies, checks, statements, receipts, summaries, pamphlets, books, invoices, checks, bills of lading, weight receipts, toll receipts, offers, contracts, agreements, deeds, leases, manifests, licenses, permits, bids, proposals, policies of insurance, logs, inter-office and intra-office communications, notations of any conversations (including, without limitation, telephone calls, meetings, and other communications such as e-mail), bulletins, printed matter, computer printouts, invoices, worksheets, graphic or oral records or representations of any kind (including, without limitation, charts, graphs, microfiche, microfilm, videotapes, recordings and motion pictures), electronic, mechanical, magnetic or electric records or representations of any kind (including, without limitation, tapes, cassettes, discs, recordings and computer memories), minutes of meetings, memoranda, notes, calendar or daily entries, agendas, notices, announcements, maps, manuals, brochures, reports of scientific study or investigation, schedules, price lists, data, sample analyses, and laboratory reports.
3. The term "hazardous substance" means (a) any substance designated pursuant to section 1321(b)(2)(A) of Title 33 of the U.S. Code, (b) any element, compound, mixture, solution, or substance designated pursuant to Section 9602 of CERCLA, (c) any hazardous waste having the characteristics identified under or listed pursuant to Section 3001 of the Solid Waste Disposal Act (42 U.S.C. § 6921) (but not including any waste the regulation of which under the Solid Waste Disposal Act, 42 U.S.C. § 6901 et seq., has been suspended by Act of Congress), (d) any toxic pollutant listed under Section 1317(a) of Title 33, (e) any hazardous air pollutant listed under section 112 of the Clean Air Act, 42 U.S.C. § 7412, and (f) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to Section 2606 of Title 15 of the U.S. Code. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (a) through (f) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).
4. The term "pollutant or contaminant" shall include, but not be limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release

into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such organisms or their offspring, except that the term "pollutant or contaminant" shall not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under CERCLA, and shall not include natural gas, liquefied natural gas, or synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas).

5. The term "release" means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant), but excludes (a) any release which results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons, (b) emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine, (c) release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in the Atomic Energy Act of 1954, 42 U.S.C. § 2011 et seq., if such release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under Section 170 of such Act, 42 U.S.C. § 2210, or, for the purposes of Section 9604 of CERCLA or any other response action, any release of source, byproduct, or special nuclear material from any processing site designated under 42 U.S.C. §§ 7912(a)(1) and 7942(a)-and (d) the normal application of fertilizer.
6. The term "waste" or "wastes" shall mean and include any discarded materials including, but not limited to, trash, garbage, refuse, by-products, solid waste, hazardous waste, hazardous substances, pollutants or contaminants, and discarded or spilled chemicals, whether solid, liquid, or sludge.
7. The term "you" when referring to an incorporated entity shall mean and include the incorporated entity and its agents and representatives, including, but not limited to, persons directly authorized to transact business on the entity's behalf such as officers, directors, or partners with which the entity is affiliated, employees, accountants, engineers, or other persons who conduct business on the entity's behalf, as well as affiliated entities, including, but not limited to, partnerships, limited liability companies, divisions, subsidiaries, and holding companies.

Enclosure D

Instructions

1. You are entitled to assert a claim of business confidentiality covering any part or all of the information you submit. If you desire to assert a claim of business confidentiality, please see Enclosure A, *Business Confidentiality Claims/Disclosure of Your Response to EPA Contractors and Grantees*. You must clearly mark such information by either stamping or using any other form of notice that such information is a trade secret, proprietary, or company confidential. To ensure to the greatest extent that your intent is clear, we recommend that you mark as confidential each page containing such claimed information.
2. Please provide a separate, detailed narrative response to each question, and to each subpart of each question, set forth in this Information Request. If you fail to provide a detailed response, EPA may deem your response to be insufficient and thus a failure to comply with this Information Request, which may subject you to penalties.
3. Precede each response with the number of the question or subpart of the question to which it corresponds. For each document or group of documents produced in response to this Information Request, indicate the number of the specific question or subpart of the question to which the document(s) responds.
4. Should you find at any time after submission of your response that any portion of the submitted information is false, misrepresents the truth or is incomplete, you must notify EPA of this fact and provide EPA with a corrected written response.
5. Any terms that are used in this Information Request and/or its Enclosures that are defined in CERCLA shall have the meaning set forth in CERCLA. Definitions of several such terms are set forth in Enclosure C, *Definitions*, for your convenience. Also, several additional terms not defined in CERCLA are defined in Enclosure C. Those terms shall have the meaning set forth in Enclosure C any time such terms are used in this Information Request and/or its Enclosures.

Enclosure E

Information Required

1. Did you (Heywood Becker) loan funds to any business entity in order to acquire, rehabilitate, and/or maintain the land and building(s) at 991 Bushkill Drive in Easton, Pennsylvania (hereinafter the "Bushkill Property")? For each loan:
 - a. State the date of the loan, the amount of the loan, and the borrower;
 - b. Provide documentation of the loan (e.g., a note or mortgage); and
 - c. Identify the date and amount of each payment made to reimburse you (Heywood Becker) for amounts so loaned.

2. You previously stated that you (Heywood Becker) acquired the Bushkill Property for "an eventual purchase price of about \$215,000," that you acquired the Bushkill Property "from a federal bankruptcy court in Texas," and that the payment for the Bushkill Property took the form of "100% of the corporate stock in Rinek Rope Co., Inc."
 - a. Please provide details regarding the acquisition of the Bushkill Property "from a federal bankruptcy court in Texas." Your answer should include, among other things:
 1. The date of such acquisition;
 2. The identity of the bankrupt party;
 3. The identity of the bankruptcy court and the docket number;
 4. The name of the party that acquired the Bushkill Property from the bankrupt party;
 5. The amount of consideration paid to acquire the Bushkill Property from the bankrupt party;
 6. The identity of the party to whom title was transferred;
 7. The relationship, if any, between you (Heywood Becker) and (a) the bankrupt party, and (b) the party that acquired the Bushkill Property from the bankrupt party.

 - b. Please provide details regarding the acquisition of the Bushkill Property by Rinek Rope Co., Inc. (Rinek). Your answer should include:
 1. The date of such acquisition;
 2. The identity of the party from whom Rinek acquired the Bushkill Property;
 3. The amount of consideration paid by Rinek to such party;
 4. The relationship, if any, between you (Heywood Becker) and (a) the party from whom Rinek acquired the Bushkill Property, and (b) Rinek.

 - c. Please provide details regarding the acquisition of the Bushkill Property by Turog Properties Ltd. Your answer should include:
 1. The date of such acquisition;
 2. The amount of consideration paid to acquire the Bushkill Property from Rinek.

3. You previously indicated that Turog was to have taken title to the Bushkill Property and that "the underlying theory was that title to [the Bushkill Property] was to be held by Turog for the beneficial ownership of Heywood Becker." Please explain the basis for this theory and provide all documents (e.g., trust agreements) supporting this contention.
4. Between 1989 and 2017, were you (Heywood Becker) paid rent by or on behalf of tenants occupying space at the Bushkill Property? For each payment so received, identify:
 - a. The date of the payment;
 - b. The amount of the payment; and
 - c. The entity making such payment.
5. You previously indicated that you (Heywood Becker) expended \$930,000 for "rehabilitation costs" associated with the Bushkill Property and supported that figure with the following formula: $\$15/\text{square foot} \times 63,000 \text{ square feet}$. the buildings on the Bushkill property "comprised approximately 62,000 sf."
 - a. Please explain the 1,000-square foot discrepancy between your initial representation of the square footage of the building(s) and the representation made in connection with the computation of rehabilitation costs.
 - b. The formula you offer in support of this amount reads like a contractor's bid for the project. Please state whether the formula accurately accounts for the funds expended by you (Heywood Becker) for rehabilitation of the Bushkill Property.
 - c. Provide documentation supporting payment by you (Heywood Becker) of the costs of rehabilitating the Bushkill Property.
6. You previously indicated that you (Heywood Becker) were owed "management and leasing fees" associated with the Bushkill Property in the amount of \$91,000 and provided the following formula in support of this figure: $7\% \times \$50,000/\text{year} \times 26 \text{ years}$. Please explain why the "\$50,000" and "26 years" figures were used in this formula.
7. You previously indicated that you (Heywood Becker) were owed the sum of \$1,114,000 at the closing of the sale of the Bushkill Property to Lafayette College.
 - a. Please identify the price paid by or on behalf of Lafayette College for the Bushkill Property.
 - b. Please identify whether any funds paid by or on behalf of Lafayette College for the Bushkill Property were paid to Turog and the amount of such payments.
 - c. Please identify the actual amount paid at closing to you (Heywood Becker) in connection with the transfer of the Bushkill Property to Lafayette College.

8. Northampton County, Pennsylvania land records indicate that Turog owned the Bushkill Property from December 20, 2005 through January 23, 2017. Please confirm that the company owned the Bushkill Property during this period or, if this information is not accurate, provide correct dates.